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PAPERS AND PROCEEDINGS
OF THE
Fifty-ninth Annual Meeting
OF THE
AMERICAN ECONOMIC ASSOCIATION

Atlantic City, New Jersey, January 23-26, 1947

Edited by the Secretary of the Association

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PROGRAM OF THE FIFTY-NINTH ANNUAL MEETING OF THE AMERICAN ECONOMIC ASSOCIATION

Atlantic City, New Jersey, January 23-26, 1947

The program of this year's meeting was, as usual, the responsibility of the President of the Association. No program committee was constituted, but President E. A. Goldenweiser sought the help of a number of key participants and the chairmen of Association committees. With their aid some twenty sessions were organized. They represent a variety of subjects, such as present economic conditions and outlook, atomic energy, public debt, money, prices, and banking problems, international trade and finance and the U.S.S.R. economy. A few of these sessions were arranged under joint sponsorship with the American Statistical Association, the Economic History Association, the Econometric Society, the Institute of Mathematical Statistics, and the American Finance Association.

A total of forty-nine major and eight minor papers and fifty-four discussion papers were prepared. With the exception of minor deletions and editorial changes, the main papers and all but a few of the discussion papers appear in this volume as they were delivered. Following our customary practice, the presidential address is published in the March number of the *American Economic Review*.

The order of papers as shown in the table of contents differs from the time schedule below, since in arranging the meetings an effort was made to avoid concurrent meetings on similar or related topics so that those interested in special subjects could attend all such sessions.

The organization of the sessions on labor economics, money, transportation and public utilities, teaching, research, and *Review of Economics* calls for special comment. The session on the approaches and areas for research in labor economics was a group enterprise. Two preliminary meetings of the participants were held and on the evening before the papers were given a panel of twenty-five or more members met to discuss the papers which they had already had three weeks to study. This discussion served as a basis for further discussion following the reading of the papers at the formal session.

In the session on money an attempt was made to present a collection of contemporary views reflecting suggestive approaches to the treatment of the changing character of money.

The session on transportation and public utility problems was an outgrowth of last year's sessions on public utility regulation, railroad problems, and shipping policy. A group of specialists in this area was encouraged to arrange a session on transportation problems.

Under the direction of the Committee on Undergraduate Teaching of Economics and the Training of Economists several subcommittees conducted a series of informal conferences during the two days of the Association's meeting at Atlantic City, dealing with the investigations in which they severally are engaged and with the reports which are completed or are in process. A separate program for these meetings was printed and distributed.

The Committee on Research organized a round table session at which exploratory reports on opportunities for research utilizing government records were presented.

The Committee on the Development of Economic Thinking and Information sponsored the round table session at which the proposed *Review of Economics* project, initiated last year, was discussed in the light of subsequent developments. The papers presented at this session are not published, since the description of the developments and present status of the project found in the minutes of the Executive Committee and the Secretary's Report are considered adequate for present purposes.

It should hardly be necessary to reiterate that the purpose of the American Economic Association is to encourage freedom of discussion and that the Association as such does not assume any responsibility for the opinions or views expressed by those who participate in its meetings. We trust also that readers may take it for granted that no one but the author is responsible for the contents of his paper. Hence the disclaimer, which often appears as a footnote, to the effect that the opinions expressed do not necessarily reflect the views of the agency or institution with which the author is affiliated, is omitted in this volume.

Thursday, January 23, 1947

10:30 A.M. Meeting of the Executive Committee

8:00 P.M. 1. *The Employment Act of 1946 and a System of National Bookkeeping*

Chairman: Theodore O. Yntema, University of Chicago

Papers: Edwin G. Nourse, President's Council of Economic Advisers;

- Morris A. Copeland, National Bureau of Economic Research
 Discussion: Raymond Goldsmith,* Civilian Production Administration;
 Roland I. Robinson,* National Association of Mutual Savings Banks
2. *The Social and Economic Significance of Atomic Energy*
 Chairman: Winfield W. Riefler, Institute for Advanced Study
 Papers: Ansley J. Coale, Social Science Research Council; Sam H. Schurr,
 Cowles Commission
 Discussion: Philip Sporn, American Gas and Electric Corporation; Jacob
 Marschak, University of Chicago; Lewis N. Dembitz, Board of Gov-
 ernors of the Federal Reserve System; Carl Kaysen,* Harvard Uni-
 versity

Friday, January 24, 1947

- 10:00 A.M. 1. *Public Debt: History* (Joint session with Economic History Association)
 Chairman: John Parké Young, Department of State
 Papers: Earl J. Hamilton, Northwestern University; Benjamin U. Ratch-
 ford, Duke University; Frank W. Fetter, Haverford College
 Discussion: Lucius Wilmerding, Jr., Institute for Advanced Study; Charles
 C. Abbott, Harvard University
2. *Economic Forecasts* (Joint session with Econometric Society)
 Chairman: Simon S. Kuznets, University of Pennsylvania
 Papers: Frank R. Garfield, Board of Governors of the Federal Reserve
 System; Jacob Marschak, University of Chicago
 Discussion: Arthur Smithies, Bureau of the Budget; Herbert Stein, Com-
 mittee for Economic Development; Oscar C. Stine,* Bureau of Agri-
 cultural Economics
3. *The Role of Social Security in a Stable Prosperity*
 Chairman: Evelyn M. Burns, New York School of Social Work, Columbia
 University
 Papers: Lewis Meriam, Brookings Institution; Eliot J. Swan, Federal Re-
 serve Bank of San Francisco
 Discussion: Harley L. Lutz, Princeton University; Selma J. Mushkin,
 Social Security Administration; M. C. Urquhart, Queen's University;
 Edwin E. Witte, University of Wisconsin; Ewan Clague, Department
 of Labor; Gerhard Colm, President's Council of Economic Advisers
- 12:30 P.M. *Luncheon Meeting*
The Economic Outlook
 Chairman: Woodlief Thomas, Board of Governors of the Federal Reserve
 System
 Papers: Woodlief Thomas, Board of Governors of the Federal Reserve
 System; Ragnar D. Naess, Naess and Cummings; Alan Temple,
 National City Bank
- 2:30 P.M. 1. *The Public Debt: Effects on Institutions and Income*
 Chairman: Robert B. Warren, Institute for Advanced Study
 Papers: Arynness Joy Wickens, United States Bureau of Labor Statistics;
 Donald B. Woodward, Mutual Life Insurance Company of New York
 Discussion: Lawrence H. Seltzer, Wayne University; James J. O'Leary,*
 Duke University; Susan B. Burr, Board of Governors of the Federal Re-
 serve System; Raymond J. Saulnier, National Bureau of Economic Re-
 search; E. A. Goldenweiser, Institute for Advanced Study
2. *The Economy of the U.S.S.R.*
 Chairman: Jacob Marschak, University of Chicago
 Papers: Paul Studenski, New York University, and Julius Wyler, New
 School for Social Research; Harry Schwartz, Syracuse University;
 Alexander Gerschenkron, Board of Governors of the Federal Reserve
 System
 Discussion: Abram Bergson, Columbia University; Paul A. Baran, Federal
 Reserve Bank of New York
3. *Domestic Versus International Economic Equilibrium*
 Chairman: James W. Angell, Columbia University
 Papers: Arthur Smithies, Bureau of the Budget; Ragnar Nurkse, Institute
 for Advanced Study

* No manuscript received.

Discussion: Arthur G. Bloomfield, Federal Reserve Bank of New York; Lloyd A. Metzler,* Yale University; Elmer Wood, University of Missouri; Raymond F. Mikesell, University of Virginia; Howard S. Ellis, University of California; Abba P. Lerner, New School for Social Research

6:30 P.M. *Dinner Meeting*

Chairman: E. A. Goldenweiser, Institute for Advanced Study

Papers: J. M. Clark, Columbia University; Sir Henry Clay, Oxford University

8:30 P.M. 1. *Prices: Wartime Heritage and Some Present Problems*

Chairman: Frederick C. Mills, Columbia University

Papers: John K. Galbraith,† *Fortune* Magazine; John T. Dunlop, Harvard University

Discussion: Corwin D. Edwards, Northwestern University; Melvin G. de Chazeau, University of Chicago; Elmer J. Working, University of Illinois; Mordecai Ezekiel, Bureau of Agricultural Economics

2. *Banking Problems*

Chairman: J. H. Riddle, Bankers' Trust Company

Papers: Charles C. Abbott, Harvard University; Harold L. Reed, Cornell University

Discussion: Howard H. Preston, University of Washington; Emile Despres,* Williams College; William R. White, Guaranty Trust Company; Ray B. Westerfield, Yale University

Saturday, January 25, 1947

10:00 A.M. 1. *Monetary Aspects of Public Debt*

Chairman: Charles C. Abbott, Harvard University

Papers: Woodlief Thomas, Board of Governors of the Federal Reserve System; J. Brooke Willis, Columbia University; George L. Bach, Carnegie Institute of Technology

Discussion: Roland I. Robinson,* National Association of Mutual Savings Banks; Paul A. Samuelson,* Massachusetts Institute of Technology; Kenneth E. Boulding, McGill University

2. *Productivity in the American Economy*

Chairman: Julius Hirsch, New York City

Papers: Benjamin Graham, New York City; Julius Hirsch, New York City; Frank R. Garfield,* Board of Governors of the Federal Reserve System; W. Duane Evans, Department of Labor

Discussion: Boris Shishkin, American Federation of Labor; George J. Stigler,* Brown University; Carter Goodrich, Columbia University

3. *International Trade Organization*

Chairman: Willard Thorp, Department of State

Papers: Clair Wilcox, Department of State; Klaus E. Knorr, Yale University

Discussion: Percy W. Bidwell, Council on Foreign Relations; Theodore W. Schultz,* University of Chicago; Alexander Gerschenkron, Board of Governors of the Federal Reserve System

12:30 P.M. *Luncheon Meeting* (Joint session with the American Finance Association)
Can the Government Influence Business Stability?

Chairman: Harry G. Guthmann, Northwestern University

Paper: John D. Clark,‡ President's Council of Economic Advisers

2:30 P.M. 1. *Vital Problems in Labor Economics: Approaches and Areas for Research*

Chairman: J. Douglas Brown, Princeton University

Papers: Charles A. Myers, Massachusetts Institute of Technology; Frederick H. Harbison, University of Chicago

2. *Transportation and Public Utilities Problems*

Chairman: G. Lloyd Wilson, University of Pennsylvania

Papers: Herbert Ashton, Industrial College, War Department; Ford K. Edwards, Interstate Commerce Commission; William N. Leonard, Rutgers University

* No manuscript received.

† To be published in a later issue of the *American Economic Review*.

‡ To be published in the proceedings issue of the *Journal of Finance* (the official publication of the American Finance Association).

Discussion: Marvin L. Fair, United States Maritime Commission; Robert W. Habeson, Interstate Commerce Commission; D. Philip Locklin,* University of Illinois; H. K. Snell, Association of American Railroads; John H. Frederick,* University of Maryland; James C. Nelson, United States Department of Commerce

3. *Round Table on the Proposed Review of Economics Project*

Chairman: Albert B. Wolfe, Ohio State University

Papers: Joseph J. Spengler,* Duke University; Albert B. Wolfe,* Ohio State University

5:00 P.M. *Business Meeting*

8:00 P.M. *Presidential Address†*

Chairman: I. L. Sharfman, University of Michigan

E. A. Goldenweiser, American Economic Association

Sunday, January 26, 1947

9:00 A.M. *Meeting of the Executive Committee*

10:00 A.M. 1. *Housing Problems*

Chairman: William A. Berridge, Metropolitan Life Insurance Company

Papers: Howard G. Brunsman, Bureau of the Census; Coleman Woodbury, University of Wisconsin

Discussion: Richard U. Ratcliff,* University of Wisconsin; J. Bion Philipson,* National Housing Agency; Arthur M. Weiner, Indiana University; Miles L. Colean, Washington, D.C.

2. *Round Table on Economic Research*

Chairman: Simeon E. Leland, Northwestern University

Papers: Simeon E. Leland, Northwestern University; Richard B. Heflebower, Brookings Institution; Joseph Bain, University of California; Harry D. Wolf, University of North Carolina; Warren S. Hunsberger, Department of State; David Novick, Civilian Production Administration; Philip M. Hamer, National Archives

3. *The Changing Character of Money*

Chairman: Howard S. Ellis, University of California

Papers: Karl H. Niebyl, Black Mountain College; Benjamin Graham, New York City; Edward C. Simmons, University of Michigan; Abba P. Lerner, New School for Social Research; Earl R. Rolph, University of California; Robert Triffin, International Monetary Fund; Walter P. Egle, University of Cincinnati; Howard S. Ellis, University of California

* No manuscript received.

† Published in the March, 1947, issue of the *American Economic Review*.

THE purpose of the American Economic Association, according to its charter, is the encouragement of economic research, the issue of publications on economic subjects, and the encouragement of perfect freedom of economic discussion. The Association as such takes no partisan attitude, nor does it commit its members to any position on practical economic questions. It is the organ of no party, sect, or institution. Persons of all shades of economic opinion are found among its members, and widely different issues are given a hearing in its annual meetings and through its publications. The Association, therefore, assumes no responsibility for the opinions expressed by those who participate in its meetings.

JAMES WASHINGTON BELL
Secretary

SOME CURRENT CLEAVAGES AMONG ECONOMISTS

By J. M. CLARK
Columbia University

I. *Divergence Is Healthy*

I have been preparing for this assignment by serving for over two years on a commission on freedom of the press. Such freedom implies divergence and is needed in our inexact discipline, struggling to adapt itself to changing conditions. The thing to be suspicious of, and to call on to defend itself, is not divergence, but any very firmly established unanimity. For over a century, economists were thus unanimous on Say's law, and important aspects of truth were thereby too long suppressed. A recent survey indicated that, when those then over fifty-five die off, the new Keynesian orthodoxy may possibly gain a similar upward supremacy. But this danger may be avoided.

There are cleavages of doctrine, of policy, and of scope and method. Underlying these are divergences of temperament and sympathy, and of occupation and economic affiliation. These are tempting subjects; but only a few samples can be dealt with.

II. *The Keynesian Revolution*

At the risk of revealing more about my own predilections than about prevailing views, I will hazard that most economists accept the area of study which the "Keynesian revolution" opened up, and some of the key "Keynesian" ideas. In particular, most would agree that the spending of income is a real problem, and does not take care of itself automatically in such fashion as to tend constantly toward full employment. Probably most would admit the possibility of a state of underemployment that has no inherent tendency to correct itself automatically and inevitably, though there would be various kinds and degrees of divergence from the orthodox Keynesian formula for describing this condition; especially, perhaps from the presentation of it as a precise "equilibrium." This seems to need modification before it can fit the facts of cyclical movements, which are so integrally bound up with the volume of employment. This concept of underemployment equilibrium was an inevitable weapon in the battle Keynes had to fight against dogmas of automatic tendencies to full employment. But now that this battle has been won, the next step is to deal with the things this oversimplified concept leaves out.

With regard to the structure of wages and prices, most economists would agree on the general outlines of the competitive ideal as desirable, usually with floors attached, but would differ widely in the

importance they attach to it. Some seem to hold that it contains the whole secret of full employment, though Pigou's elaborate defense of this theme has the air of a devoted rearguard action. Some tend to lavish attention on the minutiae of correct adjustment, and the corresponding correct allocation of resources, while others tend to disregard this whole area of questions, on the ground that refinements of correct allocation of resources are vastly less important than using the resources for something, as against involuntary idleness—as is, of course, correct. The effects of wages and prices on total volume of employment are surprisingly obscure, and the few existing serious studies have only made a beginning with them.

This issue will not be easily resolved, bedeviled as it is by conflicts of group interests. But there seems little doubt that a structure of wages and prices, filled with monopolistic restrictions and inflationary drives from the side of costs, can go far enough to be a serious handicap to a high level of employment, as well as to healthy international relations. And this issue appears to be growing, rather than subsiding into relative insignificance. In fact, the Keynesian revolution in theory, great and important as it is, may turn out to be the opening stage of a greater revolution, precipitating us into the theory and practice of an indeterminate economy of organized groups, whose social roots go far deeper, and whose social effects are far wider, than questions of wages and prices; but an economy in which wages and prices are mainly determined by other than competitive forces. The present postwar crisis may create receptiveness for this idea, as the great depression of the thirties created receptiveness for Keynesian theory.

III. *Policy: Public Expenditures Versus Private Incentives*

Some economists, when thinking of adequate spending, think mainly of private consumer-spending, plus public spending of whatever sort, for consumption or investment, and neglect private investment and the necessary incentives thereto. At the other extreme stand those who tend to regard public spending as largely unproductive or inherently wasteful, and to concentrate on those incomes which furnish the reward of private investment and the incentives to it. These differences appear to arise from different views of the relative importance of different objectives; especially as to how high and how stable a level of employment is essential, and how important it is to avoid any impairment of incentives to private investment.

When a thinker thus neglects an important aspect of reality, it generally means not that he wants it eliminated from real life but rather that he thinks it is strong enough to take care of itself, and needs no solicitude from publicists. Let its survival be threatened, or let the

balance swing against it to a serious extent, or let need arise for its increase, while it is held too rigidly within its customary scope, and the genuine thinker will probably bring this element back into an active place in his picture of things. Now it is interesting that, by this test, both public spending and the incentives to private investment are in a position calling for increased emphasis at the present time. Incentives to private investment need attention because they were pretty clearly inadequate before the war, in our last "normal" period. Public spending needs attention because it is generally recognized as a possible supplementary stimulus when private investment is insufficient; and this gives it an enlarged function which has not yet been assimilated into an agreed-on system of thought and policy.

Insofar as there is a theory back of the neglect of incentives to private investment, it seems to consist of two main parts. The first is the theory that the major determinant of private investment is the volume of consumers' expenditures—that business will in any case make enough capital outlays to furnish capacity to handle the demand that is in sight and will in any case not make much more. The second and less important theory is that relatively low prospects of return can be successfully countered by low rates of interest. Both these theories, while expressing truth, seem unfortunately one-sided.

The first can be criticized as assuming prematurely that investment of the type that pioneers vigorously and adventurously ahead of proved demand is a thing of the past. The second can be criticized as overestimating the power of rates of interest as determinants of the volume of investment, especially where the investment involves considerable risk, or where progress is so rapid that the element of functional obsolescence is a major element of cost, dwarfing such minor savings as are possible through low rates of interest. There is also the obstacle of a tax system which loads the dice against risk-taking investments of equity capital. And both theories neglect the imponderable obstacles to investment, which arise not so much from low existing rates of return as from a feeling of uneasiness and lack of a needed degree of basic security, arising from exposure to the unknown things that government or labor may do next.

This last is a serious matter, not to be cured quickly and easily. Government cannot abandon its necessary function of regulation, nor safely circumscribe it within conventional and traditional limits. It will have to blaze new trails in the future, as in the past—trails through which business will have to learn to find its way, though the process may have its uncomfortable aspects. And labor, for the good of the economy, must have power enough to exert real pressure on business, and to make it do things which do not always come easily. The best

that can be hoped for is a conviction on all sides that necessary changes will be made in a spirit of reasonable consideration for the genuine needs of the interests that are affected. This feeling of underlying confidence in the reasonable character of other parties' attitudes is probably the best definition of the kind of "security" which our system needs for the generation that is ahead.

The opposite theory, which relies entirely on maximum incentive to private investment, is also one-sided. It reverses the logic of the consumption theory, by holding that the way to high consumption is high employment, and the way to high employment is high investment, which is therefore the thing to seek first. There is much reason in the claim that if we act on this assumption, we shall make a better record than if we go entirely on the contrary assumption that has just been analyzed—better, that is, so far as concerns employment arising spontaneously from market demand, and not jobs directly created by government expenditures. Our dependence on public creation of jobs could be reduced. But any such dependence at all is suspect under this theory, as involving further and more or less continuous deficit spending, which in itself tends to undermine business confidence and thus to prevent private investment from showing what it can do.

So the full and logical flower of this theory is reliance on private business to do the whole job; and a sheer act of faith in its power to do it. This faith gets some added support from the record of the months following Japan's surrender, not merely because employment was high, but because this happened when advocates of public intervention had been predicting eight million unemployed. But such a discomfiture of the prophets of gloom is not certain to last; it is too shaky a foundation on which to stake the success of a policy. In fact, one of the certainties seems to be that the system of private enterprise breeds cyclical fluctuations, with an inherent probability that they will acquire larger amplitude as increasing per capita real income increases the proportion of nonessential and postponable expenses in our national budget. Further, there seems to be an inherent possibility of something like chronic underemployment, showing itself in a failure of the cyclical fluctuations to reach full employment even at the peak; and possibly showing itself also in a weakening and retarding of the forces of automatic recovery.

The strongest ground for hope that these darker possibilities will not materialize seems to be the fact that growing numbers of industrialists are recognizing the maintenance of employment as an integral part of the main job of industry. They are recognizing that the survival of private enterprise is contingent on achieving a better performance than in 1930-39. And a significant number of them are according government a positive place in this picture, recognizing that the single enter-

prise is not in a position to eliminate the root causes of the trouble. If business does its best and government collaborates with moderate measures, stopping short of those that would disturb business confidence substantially, we may see an improved performance; but we shall not permanently eliminate unemployment.

This leaves us facing a question of degree. American labor and agriculture now definitely prefer private enterprise to collectivism, even at the cost of some unemployment; but how much unemployment will this attitude survive? Is there some point at which they would either change their minds and deliberately prefer collectivism, or else demand of government further measures which would be inconsistent with successful performance by private business, and would therefore lead to collectivism by default and without what could fairly be called deliberate choice? There are several criteria which will play a part in the answer to this crucial question.

One is the criterion of the amount of unemployment for which adequate unemployment compensation can be financed without imposing burdens so heavy as themselves to be a crippling handicap to private employment, and thus to bring about a vicious circle. This limit has been brought to the front in the Beveridge plan. Secondly, within the limits of financially practicable compensation, will there be enough workers idle and dependent on benefits for long enough periods to create discontent which will require a change that would substitute jobs for doles? Thirdly, if such a situation arises, how much further public intervention can business assimilate without falling into the vicious circle already mentioned? This is probably a moving limit, but at any given time a real one. Fourthly, if this limit is approached, will labor and other interested groups revise their ideas about the amount of unemployment they are prepared to tolerate, or will they decide that they prefer collectivism, or will they go ahead with employment-creating policies and take their chances on the outcome? It is the answers to these imponderable questions that will decide whether the cleavage of thought and policy we are considering can be resolved in a workable synthesis.

IV. *Wages Versus Profits*

There are some to whom the crucial test of policy seems to be its effect in redistributing income in the direction of greater equality, or increasing wages at the expense of profits, with no limit suggested. Others show an opposite leaning. Such divergences would appear to have roots in temperament and sympathies, affecting judgment as to the relative importance of things. At any rate, in the light of the crisis of 1946 and the threat of a renewal in 1947, there can be little justifica-

tion for neglecting this problem, as some Keynesians tend to do. Our uncertainty as to the effects of the wage-price structure on total real spending and employment merely emphasizes its importance as a problem.

As to the cleavage between those who hold that higher wages reduce employment and those who maintain that they increase it, let me suggest the novel and radical idea that it depends on how high wages are to start with—that there is an optimum share which wages may fall short of, or may exceed. As to the location of this optimum relative to actual wages, there is a presumption that, with the present power of unions and the tactical situations and pressures under which labor leaders find themselves, they are under impulsion, and have power, to push wages above the optimum unless present powers of resistance increase.

On the other hand, at a time when opinion is swinging in this direction, it is well to remember that high and increasing wages are a necessity to the health of business, and that for its own good it is probably necessary that labor should have power enough to make business pay more than is pleasant for it—more than it would choose to pay if the power lay in its hands undisputed. Under existing monetary conditions, it is probably better if wages are pushing against the top of the optimum zone than if they are in danger of falling below its lower limits.

And if the health of the economy requires a lower rate of profit than business has thought reasonable in the past—as may very well be the case—then the important thing would seem to be to take thought for adjusting the business structure so that it may be viable at a reduced average level of profit. Merely reducing the average, with no other change, would increase to a dangerous extent the number of concerns which at any given time are making deficits.

V. *Mathematical Economists and Others*

There is one cleavage of a different sort about which I feel rather strongly. Mathematical economists constitute a growing and able sect, using an esoteric method and a special language which make their results increasingly inaccessible to the rest of us, and a plea for communicability seems much in order. The main ground for such a plea is, first, that their work is not complete without verification of their concepts and premises, as to their resemblance to reality, and of the consequent degree of approximation with which reality can be expected to conform to the indicated results. Secondly, this verification is a job for a different type of student from the one whose time has been spent in the mastering and manipulation of these high-powered techniques.

Mathematical economics can fairly be asked, in the interest of its own influence and acceptance, to do its part toward making such verification possible.

There appears to be some lack of clarity as to what economists in general can justly ask of mathematical economics. They are not concerned with what kinds of rabbits the initiated can pull out of their curious hats. The widely variant answers to the problem of duopoly may serve as a simple illustration of the different breeds of rabbits that can emerge from not-very-different-looking hats. And in a limited number of instances in which I have been able to check how the rabbit got into the hat, I have concluded that he did not have a very close biological relationship to the rabbits one meets in actual economic life. It would be invidious to cite instances; but those I have in mind include outstanding ones, which have earned rank as classics in their field.

What an economist wants to know is what features of the concepts and assumptions used are responsible for the character of the results, and how much difference it would make to the results if these concepts and assumptions were modified by taking in more of the complexities of reality. And when an optimum, or a level of equilibrium, is defined, he needs to know whether it is closely determined, or whether it is of such a sort that a small range of indeterminateness in the conditioning factors could permit a large shift in the result. Sometimes it seems to be of the latter character.

What is needed is not a reduction of difficulty for the uninitiated by elision of steps in the reasoning; rather the contrary, it is greater attention to certain steps which the specialists tend to elide, when they are talking, as they usually must, to one another. Professor Hicks recently told the writer that he likes to test propositions by putting them both in language and in symbols. This seems highly desirable for important theorems, not only as facilitating verification, of the sort indicated, but as safeguarding the original reasoning against nonsense results. In manipulation, abstract symbols can be made to do things foreign to the nature of the economic realities they represent; hence symbols do not automatically eliminate loose thinking.

Bertrand Russell once spoke, I believe, of the ambiguity of the word "is." This presumably remains, but is harder to detect, when the word is translated into an equals sign in an equation. More concretely, the economic meaning of supply and of supply schedules, as autonomous economic determinants, is peculiarly tricky; so also is the concept of substitution of factors for one another in response to adjustments of their costs. Essential factors of time are terribly easy to ignore and can result in application to business cycles of conclusions pertinent only to longer movements.

In one case the only conclusion I was able to reach was that the indicated result sometimes happened, and sometimes the opposite; and that when it happened, it did so for several reasons other than the one given. In another case, the conclusion was that a limited movement occurred where the formula indicated an unlimited one, because the determinants did not act as the formula assumed.

If all cases were like these, one need not worry too much. The trouble is that it seems likely that this body of thought contains important truths—truths so important that they should not be ignored—mixed with other matter and not verified to the point of being safe to adopt and apply. And I take the risk of giving offense where none is intended, precisely because of my sense of the probable importance of some of these truths. In fact, this method seems able to make unique contributions to the whole long-neglected area of total flow of income and employment; and it would be tragic if the type of economist fitted for realistic verification of premises should be excluded from access to the most powerful theoretical analysis in this field. So my purpose is not needling, but *rapprochement*.

VI. *Are Professors Useful?*

A final differentiation worth more than passing mention is that between professors—specifically, the theoretical variety—and other kinds of economists. It is not generally realized for how limited a time “regular” economics has been dominantly in the custody of a guild of professors, especially in view of the fact that they do not seem to develop their full peculiarities unless they are members of a group dealing with their own subject and having a tradition to conserve. That enables me to rule out Adam Smith and Malthus, while Quesnay, Ricardo, Mill, Marx, and other notable pioneers are already in the nonprofessorial category. The change to professorial dominance came perhaps in the last third of the nineteenth century; and now the supremacy of the guild is waning notably with the growth of economists in government, private research foundations, and advisory positions to business and labor. The time may be ripe for an appraisal of the benefits and detriment which have accrued to our tradition from the influence of the guild.

The development of economic theory has reflected both the issues and conditions of its time—usually with a lag—and the momentum of its own intellectual formulas. The mutation to “marginalism” that marked the opening of the guild period consisted of new answers to Ricardian problems, suited to a successfully expanding period of industrialism and armed against the uses Marx had made of Ricardo. Subsequent piecemeal reform made little impress on the structure of

theory.¹ The great depression of the thirties brought a fresh creative impulse, springing once more from the soil of current problems. Its dominant figure—Lord Keynes—was both a member of the guild and a good deal else besides.

In general, and with notable exceptions, the professorial influence has been on the side of developing and refining its own received canon, with an amazing wealth and variety of scholarly methods and abilities, combined with great areas of deliberate ritual blindness to vitally important aspects of the world they are interpreting. There is also what Veblen would have called the "self-contamination of the professorial instinct of workmanship," whereby a theory becomes an end in itself, in defense of which inconvenient facts must be by-passed, neutralized, or ignored. Professors seem to feel strongly about making economics a science; and to be impelled, somewhat more than others, to make it an exact science—more exact, in fact, than the material warrants. This urges them to formulate problems and select assumptions permitting an answer in the form of a precisely determined equilibrium.² Thus the search for a precise result conflicts with realism, and accounts for conclusions with which realistic students disagree.

Another professorial trait (especially, it seems, among economic theorists) is an interest in the boundaries of their discipline, and in staying inside them. This leads many today to adjudge it unscientific to consider the human importance of things and to ask what ends economic mechanisms serve—the only scientific method being to accept as final data the choices made by individuals, mainly or entirely the kind of choices made in markets. In particular, there is the school which insists that economists must make no "interpersonal comparisons" of values, and there is the "welfare economics," built within this strange self-imposed restriction, which means in effect that it must accept the kinds of valuations—including interpersonal comparisons—which markets make. The notorious social biases of such choices are not cured by the fact that other practically-available ways of reaching decisions are also biased.

The economics that is uppermost today deals with statistically measurable quantities, with their movements and their interrelations. In that sense it is not entangled in the question of subjective values. But the greater part of it centers around the recognition of one supremely important human value; namely, the value of a job. On this one

¹ Pigou's *Economics of Welfare* is a notable exception.

² I have found an eminent economist rejecting certain assumptions, without even inquiring whether they corresponded with the facts, for the sole reason that they were inconsistent with a determinate equilibrium. Since the facts afford ample evidence of the presence of forces that do not lead to precise equilibrium, this amounts to excluding part of the forces known to be at work. It is no doubt done more often than it is openly acknowledged.

requisite of sound living, most of us are ready to set a value which we do not get from the valuation markets set on it. This is a good beginning. Other values may be found equally deserving of recognition.

This picture, like all such pictures, is too simple. And the peculiar services of the guild, in developing tools of thought and refining formulations, are not to be lightly disparaged. Professors, like politicians, are not only necessary evils; they have their positive uses. But after looking at the story, it may well seem that they can render their best service as members of a balanced team. And as members of a team, one of their most invaluable contributions is paradoxical, arising from the fact that economics is not an exact science. Where issues spring from conflicts of organized interests, and cannot be solved by mechanical processes of calculation, the disinterested impartiality and objectivity of the professor become invaluable, if they are not allowed to become desiccated in ivory-tower detachment, and if he serves, not as intellectual dictator, but as a member of a team, receptive to the values the other members express. This is obvious in the settling of particular disputes. It is, I believe, no less true of what goes into the generalizations or abstractions of theory.

But how bring about the necessary teamwork? There are still cleavages between professors and others; but there are also bridges. Professors move in and out of public administration. Schools of business afford contacts, though it must be admitted that they do not always yield perfect teamwork. The Committee for Economic Development has afforded contacts; to the high value of which I am glad to be able to testify. But perhaps the most important force is the irresistible exposure of the professor to the pressure of problems arising from his perplexed and agitated world rather than from the received canon of his discipline. It is up to him to let these pressures register.

Can he do it? That is an individual matter; and various tests could be suggested. Can he treat every theorem as a tool of analysis and not an end-product; an approach to reality rather than the terminus of the journey; a partial and provisional truth, always on trial? And can he rise superior to his own intellectual vested interests in these theorems—which he will always have? Can he resist the temptation, when he has defined the behavior of his model, to say: "This will happen, in actuality"? Can he call monopoly, monopoly wherever he finds it, or does he call it "the democratic process" when he finds it in the hands of someone he approves of? Is he one who cannot think he is thinking unless he is maximizing something with mathematical precision, or who discards a premise if it does not lead to a determinate equilibrium? Can he recognize an idea as of value if it is expressed in plain English and not in esoteric code? (Not that codes should be abolished.) Can he

) stand the test of long-sustained reading of formal theoretical works of classical or neoclassical type without ever forgetting what is left out?

Finally, can he keep his ideals separate from his formulations of actual economic forces; or will he mix them up, as did Koko, the Lord High Executioner, when he excused himself for falsely pretending to have carried out the Mikado's order by saying: "When your Majesty says, 'let a thing be done,' it's as good as done . . . practically, it *is* done . . . because your Majesty's will is law. Consequently, why not say so?" The Mikado accepted the explanation for a purely literary reason: he had to, to bring the opera to a happy ending. Is our professor equally biased toward happy endings?

You may conclude that, like Koko, "I've got a little list," but also that, like Koko (and unlike Mortimer Adler), I do not propose to execute anybody. Let us have not cleavages but fruitful differences, and let us build as many bridges as we can.

THE ECONOMIC OUTLOOK OF THE UNITED KINGDOM

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My subject is one that involves prophecy, and prophecy is an exercise from which I shrink, even when it is called forecasting. When the future depends on political as well as economic policies, on other countries as well as the country under discussion, and on the large element of accident which, though ignored in these days of planning, remains important in all large political and economic problems, the need for caution is greater. I shall limit my liabilities by confining what I have to say to a single change to be observed between the two wars, a change to which the second war has given additional significance, and I shall leave you to draw your own inferences after collating that change with others and with anything in the position of the United Kingdom, if there is anything, which remains unchanged.

There is a rough and ready index of the change I have in mind in the fall between 1912 and 1938 in the proportion of British industrial production which was devoted to export. It fell from about two-fifths of the whole to about one-seventh. A seventh is not a small proportion; the multiplier effect on the rest of the economy of any variation in so large a fraction might be great, and its influence is enhanced by the concentration of a large part of this export production on a few industries and a few areas. But the decline is a significant change.

Some such change was overdue before the first World War. The concentration on the one hand of so much of the world's export trade in textiles, coal, ships, and hardware in British hands, and on the other of so much of British resources in these exports was a survival of nineteenth century conditions which were passing and likely to be altered as knowledge of modern technology spread from old industrialized countries to new countries. But the change might have been gradual and easy; the history of British export trade is a story of continual shift from markets reduced by tariffs or more efficient competition to new markets, from Europe to North America, from North America to the East, the Dominions, and South America. The effect of the war was to defer the adjustment and render the need for it sudden and catastrophic instead of gradual and easy.

The war inevitably had some such effect. It interrupted the contact between producers and their markets, driving the latter to seek alternative sources of supply. It excited nationalist feeling which supported demands for protection set up by new wartime industries in former markets. One great change of the interwar period has been the virtual

completion of the wall of tariffs with which exports are faced. Before 1914 there were still wide gaps which the flood of exports could pour through whenever diverted by some raising of tariff walls here or there; by 1933 these gaps had been closed, or their early closing could be foreseen. This completion of the tariff obstacle to trade was far more serious than the height or form of particular obstructions to trade with any one country. The war dislocated normal relations between industries, between different prices, and between wages in different occupations. It increased the risks and raised the costs of industry, and left a burden of debt. The English system of taxation imposes heavy charges on profits, irrespective of whether they are distributed or retained in the business; thus it intercepted the funds on which the redirection and re-equipment of industry would previously have drawn for finance. And the chief task facing British industry in 1920 was just such a re-orientation.

The concentration of scientific interest between the wars on trade cycle theory may have been justified in America. In the United Kingdom it was unfortunate. It diverted attention from the structural problem of dislocation calling for far-reaching reorganization, offering the interested public fascinating analyses of the effects of varying interest rates, when in important industrial areas one in five or six of the occupied population remained unemployed through boom and depression, high interest rates, and cheap money.

The second World War may be expected to have effects similar to the first. The dislocation was greater and more prolonged. On the other hand, the control of prices and supplies was more effective; and a conscious policy aimed at anticipating and resisting the protectionist influences of war is another difference. It is because this policy seems to me so important that I have thought it worth while to try to elucidate the change it seeks to reverse. If I had to put in a sentence the change indicated by the two fractions I compared, I should say that in 1914 England was the center of a world economy which by 1938 had been disrupted. I was going to say a rudimentary world economy, but it was more than that. When I began teaching economics, I used to tell my students that international trade was a misnomer, all trade was inter-individual; by 1938 international trade had become only too true a description.

One hundred years ago the United Kingdom took a great risk—the risk of dependence in large measure for its food on imports and dependence in large measure for employment on exports. The decision was abundantly justified; the standard of life rose to heights that would have been impossible under any other policy, and industry expanded steadily to employ a large increase in population. Almost as

a by-product of a self-regarding policy, a world economy came into existence—almost, but not altogether, because there was a strong idealist element in the political movement which forced the new policy on the country. But the chief explanation of the change was the continuing influence of the opening of the British market to imports.

This opening made it possible and economically safe for other countries to devote a large part of their resources to specializing production for export; had there been no such open market, it would have been unsafe for regions like New Zealand or the Argentine to specialize for export, and regional specialization would have developed only in continental states like the United States of America and Russia. Correlative specialization of the United Kingdom and other industrialized countries on industrial exports developed simultaneously. Shipping and other communications expanded; a network of personal and financial relations was established to serve as the nerve system of the world economy—merchants operating over half the world, managing agents and affiliated firms, overseas banks and financial houses. Trade and payments moved as freely and easily between different parts of western Europe, the Far East, the Dominions, and the Americas, as between different counties of the same state in an earlier age.

The process by which this market unification of so much of the world proceeded was very simple. The United Kingdom was always willing to buy—at least it opposed no obstacle to the entry of imports; but it bought for its own currency—sterling. The suppliers of exports to the United Kingdom acquired sterling and used it either to buy British exports or to make payments to third parties. Thus sterling acquired the status of an international currency, generally acceptable over a large part of the world and used to make payments in many transactions outside the United Kingdom. Because so many people in other countries received sterling for British imports and needed it to pay for British exports, they slipped into the habit of holding sterling balances on which they could draw at will. They let these accumulate when their sales to the United Kingdom outran their purchases; they replenished them against future needs by borrowing on the London capital market. There appeared to be a notion during the recent war and earlier when the United Kingdom went off the gold standard, that the sterling area was a recent creation. It was nothing of the kind; it dated from the time when the first bank in a new country was established by British capital and, since its first work would be to make payments in trade between the new country and London, kept a part of its resources in the form of a balance in London. As trade with the United Kingdom grew and more and more payments came to be made in sterling, it became necessary for countries using sterling to keep

balances in London, the center through which their payments were cleared; and the sterling area is simply the group of countries which at any time, because they clear so many of their payments through London, kept an important part of their reserves in the form of sterling balances. So long as sterling was linked to gold, there was some excuse for not perceiving this; but for fifty years before 1931 a sterling area had existed, the members of which were on a sterling exchange standard, linked only indirectly with gold. A similar misunderstanding was the illusion that the so-called "dollar pool" was a wartime creation. Like the sterling area, it was an old-standing natural practice; the countries in the area, just because they made most of their foreign payments in sterling, did not require direct relations with New York; if they acquired dollars, they sold them in London and credited the proceeds to their sterling balances; if they wanted dollars, they bought them in London. The unified control by common agreement of wartime was merely the means of reserving precious dollars for payments of highest wartime priority; if as a result of postwar changes, dollar requirements of sterling area countries are no longer met through London, not a single additional dollar will be spent on American exports, but the business of dealing in sterling-dollar exchange will be spread over a dozen narrow markets instead of being collected in one broad market with an inevitable, if slight, increase in the cost of the business.

I have dwelled at some length on the status of sterling as a world currency because it supported and amplified the influence which the ever open British market for imports exercised. It did this because it removed any currency limit on the amount of British imports, both in periods of good trade and in depression; any *currency* limit I have said, because the limits imposed by ordinary commercial influences remained. But the currency limit is important. We English and Americans do not realize how fortunate we are in being able to buy all the imports we want with our own currency. Other countries in the main have to make sure of their foreign exchange before they can import, because suppliers in other countries will not usually accept payments in the currency of the importing country. Those countries with currencies which have not a world-wide acceptability insist, therefore, when possible, on payment for their own exports in one or the other of the great world currencies or in gold; the Poles before the war wanted payment for their exports in sterling, not in zloty; the Greeks in sterling, not in drachmae; I doubt whether the Russians would have thanked you for payment in rubles; and we know what ingenuity the Germans showed in avoiding payment in marks, except under a clearing system devised and controlled by themselves. The United States of America also can always secure its imports by offer of its own currency; but the United

States did not open its markets to imports with the same freedom as the United Kingdom, and it is the combination of an open market with ability to pay for imports in that market's own currency which gave the British market its economic influence.

It is interesting to note that Keynes's first proposal for an international monetary union merely generalized the position of sterling on the eve of the war. Imports could be paid for to any amount in Bancor; if the suppliers of those imports did not use the proceeds to purchase compensating exports, they could not demand conversion into gold but were forced to leave the proceeds as a virtual loan to the importing country, in the form of a Bancor balance. Similarly the United Kingdom paid for imports in sterling, and if corresponding exports did not result, all that happened was that foreign sterling balances went up. Actually before the war the administration of sterling offered greater facilities than the Keynes scheme proposed, since it allowed capital transfers. It could hardly have maintained that facility after the war.

Because sterling enjoyed this position, the British market had an expansive influence on world trade and provided a support for trade even in the worst depression. The evidence is the expansion in the volume of British imports between the boom year of 1929 and the bottom of the world slump in 1931. I cannot judge whether a market of this sort—a market in which the countries depending on exports can dump their surplus and get good foreign exchange when trade is at its worst—is indispensable or not. I am sure that it is a powerful support and stimulus to world trade. And there are parallels which suggest that it is essential. It is inconceivable that the growth of corporate enterprise could have gone so far if there had not developed *pari passu* stock exchanges in which people who had committed their savings to corporate enterprise could in case of need realize their securities. It is generally accepted that the present extended use of credit would have been impossible without central banks from whom in emergency, when liabilities had to be met and every other resource was closed, credit on some terms could be obtained. The elementary function of a central bank is to act as "lender of last resort"; the function of the United Kingdom market before 1914, and indeed until 1933, was to act as "buyer of last resort."

It will be clear even from the little I was able to say about British trade between the wars that Britain's ability to sustain this role had been seriously hampered by the first World War. The importance for our present limited purpose of the second war is that it made it certain that the United Kingdom would no longer sustain it. The trend of British imports was upwards, even after the introduction of protec-

tion, until the eve of war; but the trend of exports was downwards, with the result that first a favorable balance on current account available for foreign lending in the twenties disappeared and then it was replaced by a deficit met by the liquidation of overseas investments. The war compelled the United Kingdom to realize overseas investments and to incur overseas liabilities to a total of over 4 billion pounds, more than the total estimated value of British overseas assets before the war. This effected a revolution in the country's balance of trade payments. Before the war the country paid for about 900 million pounds of imports with 500 millions of exports, 200 millions of income from overseas investments, 100 millions of shipping earnings, leaving a gap only partially bridged by banking and other services. The loss of the income from foreign investments which has to be faced when the large total short-term indebtedness is funded leaves a gap which cannot suddenly be bridged. Meanwhile the country's need of imports has not diminished.

It is idle to speculate what might have happened had the United Kingdom set itself to work back to something like its prewar position and practice, with such restrictions of imports and payments as were unavoidable. For its adhesion to the International Monetary Fund recognized as permanent and confirmed the change produced by the war, in two ways: by accepting the obligation of convertibility under section 4 of Article VIII, it deprived itself of the discretion it had enjoyed between 1931 and 1946 in meeting current payments or accepting imports only on condition that the supplier was content, until exports expanded, to hold the sterling with which he was paid; while the right accorded to deficiency countries by section 5 of Article IV to devalue their currencies by as much as 10 per cent must constitute a powerful deterrent on willingness to hold sterling. Flexibility in exchange rates is probably necessary to countries dependent on a single or a few agricultural exports; to the industrialized countries of Western Europe with their varied and diverse trade only a drastic devaluation of 30 or 40 per cent, or alternatively a discriminatory range of devaluations in relation to different countries and even to different commodities offers much prospect of relief. The advantage of going off gold was different and distinct; by relieving the country of the obligation of convertibility it made it possible for the monetary authorities to pursue an expansive credit policy which helped to revive the domestic market in spite of an unfavorable external position.

The net outcome of these changes and commitments is that the monetary authorities of the United Kingdom can no longer take the risks of an unbalanced external position. They are forced to watch their accounts with other countries and take action to correct any

divergence from equilibrium. They can of course draw upon the international monetary fund; but their total credit would not meet the deficit on last year's accounts, and the annual draft they can make would not do more after allowing for the rise in prices than cover the prewar annual deficit.

If the United Kingdom is no longer able to sustain the role of buyer of last resort, the prospects of international trade must be affected. Trade may expand; but it will lack the stimulus and support of a market that does not shut up when trade falls off and it is needed most. The reaction on the countries most dependent on exports—the specialized agricultural regions of the world—may be serious. Agricultural prices fell disastrously between 1929 and 1931—to the British consumers' benefit—with the United Kingdom market open. If that market or a similar successor is unable to keep open, it is not obvious where the world's agricultural surpluses will go, and the existence of any large surplus will depress prices. Only one country is in a strong enough position to undertake the function which the United Kingdom has ceased to discharge—the United States of America. I do not know whether there is any hope of such a revolution. The United States in 1946 has much in common in its relations with the rest of the world with the United Kingdom in 1846. It is not under the compulsion that the United Kingdom was to open its market to supplies for a starving population, but it is in a far stronger position to take the risk. A foreigner can have no opinion, at any rate for publication, on this issue.

My subject is the outlook for the United Kingdom, and the bearing of the change here is clear enough. The standard of life of the population of the United Kingdom is dependent on imports; it cannot be restored from its depressed wartime level unless imports can be increased. Given time, the means to pay for increased imports may be found or adequate substitutes for imports developed; but the time may be long. Meanwhile the country is, it seems to me, likely to suffer from its failure to integrate two economic policies, pursuing an identical aim, which were elaborated without sufficient regard for any possible difficulty in paying for imports.

The first is the policy of full employment, to which all political parties are committed. Between the wars the government was driven to experiment in methods of providing employment by state action. One effect of these experiments was to encourage the shift of resources from the depressed export industries to the expanding home-market industries, particularly building. The development of this experiment into a fully elaborated policy is likely to have the same effect, since governments will always be under pressure to do first whatever can be done in

the area under their direct control—the home market. The other policy, less explicitly formulated but assumed in the great program of extended social services, is the raising of the standard of life of the population and the elimination of poverty. If the full employment policy accentuates the trend away from export industry and the country can enjoy only such imports as it can pay for currently, full employment will stand in the way of a higher standard of life. This is no unreal danger. The present financial policy of maintaining cheap money by the constant pressure of increased monetary supplies produces inflationary conditions in the home market which by themselves would handicap exports and stimulate imports. It is not allowed to show this inflationary effect, and wartime control of the cost of living and of imports prevents the overt effect. But the rise of prices, outside the area of controlled and rationed goods, the high level of stock market prices, easy profits, and universal shortages afford evidence of an inflationary movement repressed but not prevented. The inflationary condition of the labor-market—an incident of full employment that has never been faced—has something to do with the lowered efficiency of labor compared with before the war. It is not the whole explanation; shortages and uneven movement of supplies, the failure to co-ordinate controls of materials and complementary production have to be brought into any explanation; but some influence must be allowed to the disappearance of the fear of unemployment. The program of social reforms was based on an assumed increase in national real income; 13 per cent between 1938 and 1948 was an authoritative estimate. Such measures of output as are available point to a substantial decline in real income.

Keynes in the *Treatise on Money* compelled his contemporaries to face two potential disharmonies in a market economy which the classical economists had slurred over. He pointed out that the tendency for savings to be invested and so to furnish employment could not be assumed. The decision to save and the decision to invest were separate decisions made on different considerations and made largely by different persons. It was not sufficient, therefore, in case of wide divergence, to rely on the market to bring them into accord, and government action might be needed. Similarly the decision to export and the decision to import were distinct, made on different considerations largely by different persons. He was more successful in impressing the former on his contemporaries than the latter, and a “cleavage” which might be added to Mr. Clark’s list is between the English economists who accept the need of government intervention to insure an adequate volume of investment in the interest of full employment, but regard the unaided influence of market forces under multilateral trade as sufficient to insure a balance of imports and exports; and another group who hold

the view that government must either plan the whole economy, in its external as well as its internal relations, or leave both factors to be regulated spontaneously by production responding to free spending. My own opinion is, for what it is worth, that the scale of adjustment called for must decide policy, and that to leave United Kingdom imports and exports, after the loss of the country's creditor position, to find their own level without government assistance would be so devastating both to employment and consumption that no government could persist in the policy. Market forces in the long run would no doubt restore equilibrium in the balance of payments, but the transition would be painful and slow. After the first World War the country had a similar readjustment to make; it made it by leaving the unemployed in the older export industries to live on relief until the expanding home market industries could absorb them, in the meantime balancing expanding imports, first by reducing foreign lending and then by liquidating overseas assets.

It is to be expected, therefore, that the United Kingdom will work for increased exports; but, since these will not be easy once the restocking phase is ended, that it will restrict imports. A year and a half has elapsed since war ended and much has been done to convert industry to peacetime needs; but the wartime system of controls of consumption and control of imports still continues, and shows few signs of disappearing. Before imports can be freed it will be necessary to redirect industry and develop a new distribution of resources adapted to the changed conditions of the country. Much capital must be written off, much new capital provided, and a large diversion of labor brought about. Such a change can be made possible only if industry has great adaptability, and present political tendencies do not favor adaptability. The controls of material and investment which are maintained to prevent prices from rising hamper it. The cheap and plentiful money policy encourages adaptation to the demands of the inflated domestic market; the taxation of business profits depletes the funds by which re-adaptation should be financed at the very point at which there is evidence of the need and capacity for such changes. And I find it hard to believe that the extension of government ownership and operation to a fifth of the economy, coupled with an authoritarian interference with the free direction of industry in the rest of the economy, is likely to make the economy more elastic and adaptable. Since the country in its new position has somehow to balance its sales to and purchases from the rest of the world, it would seem to be left with no alternative except to curtail its purchases. This is the novel element in the peacetime outlook of the United Kingdom.

THE EMPLOYMENT ACT OF 1946 AND A SYSTEM OF NATIONAL BOOKKEEPING

ECONOMICS IN THE PUBLIC SERVICE

By EDWIN G. NOURSE
Council of Economic Advisers

On December 27, 1918, Professor Irving Fisher presented his presidential address to this Association under the title, "Economists in Public Service," taking as his text the then impressive fact that in Washington alone 120 members of the Association had been in public service—forsaking that aloofness from practical affairs that had been traditional in the profession.

At the time, in January, 1943, when I had the responsibility of conducting a Washington meeting in lieu of the Association's Cleveland convention, proscribed by ODT, more than 1,000 names from our membership of about 4,000 reported addresses in the Washington metropolitan area. Most of them were working with some war agency, and hundreds more outside Washington were actively participating in one way or another in the economic phases of the war effort.

As the nation undertakes now to reorganize its life again—but more skillfully and more effectively—on a peacetime basis, many of this army of economists "far called, begins to melt away." They carry back into the classrooms, the libraries, and the research laboratories of their private institutions a new outlook upon and more intimate familiarity with the functioning of the nation's economic life, seen in its practical reality and in its complex entirety, albeit under the strains of wartime controls.

Despite the size of this returning band of displaced persons to "normal" life, a large corps of economists and statisticians remain on the staffs of established economic agencies within the frame of the federal government. The precise size of personnel and scope of activities must remain in doubt until we have tested the weight and sharpness of the Republican ax. For myself, however, I do not feel great alarm that our standing army of economists in federal service will be cut below the point where, with skillful and provident administration, they can reasonably well protect our frontier of economic understanding against the hosts of ignorance and prejudice. Their ranks will, of course, always be supplemented by the local militia of our colleges and universities, private research institutions, nonfederal government bureaus, and private business and labor organizations.

(I purposely refer to economists in all these posts as part of a single

force, only loosely connected, but all seeking the same major objective. I purposely refrain from allowing the question of conflicting objectives of rival war lords and predatory guerilla bands from rearing its ugly head in the midst of this pleasant picture of professional solidarity.)

It is not my intention to undertake any broad analysis of or general disquisition upon the nature of the economist's job or how economists are serving the specific employers who sign their pay rolls or the general interest which also must be affected one way or the other by the impact of their work. What I have to say is dictated entirely by the fact that something new has been added to our governmental system just as we stand on the threshold of a new era of peace—a long or indeed a permanent peace—if we are not utterly mad. The new device is installed at a point of great significance and conceivably of great influence for the economist and for that branch of social science which we call economics.

• This step in the evolution of our economic institutions to which I refer came with the passage of the Employment Act of 1946 and the setting up of a Council of Economic Advisers in the Executive Office of the President. I have had occasion during the last few months to explore the meaning of this move in various gatherings—newspaper men, bankers, engineers, labor representatives, and the N.A.M. I deem it a very great privilege to be able to examine the theme again more intimately and with more freedom to raise technical issues because I now address the members of my own professional association.

When President Goldenweiser invited me to appear on this program, I thought first of stealing Professor Fisher's title, just as he phrased it at the end of the first World War. When I looked back to check my memory of his title, I realized that he had said, "Economists in Public Service," whereas I had been thinking, "Economists in *the* Public Service"—a slight but potentially significant difference. I did not want my title to convey the idea of economists merely as federal job holders—even tax eaters. The phrase "in the public service" means much more than "in government employ."

Then, as I thought further, it seemed desirable to move also from the rather personalized suggestion conveyed by the word economists to the more generalized and depersonalized suggestion carried by the title, "Economics in the Public Service." This phrasing reflects quite succinctly my own interpretation of the role of the Council of Economic Advisers to the President. I conceive this agency as the doorway through which the best thinking of systematic economics (not forgetting the lay brothers) may be brought into clear and effective focus at the point of executive decision as to national economic policy and action.

Some cynical people have alluded to the Council as "the Three Wise Men of Economics," standing at the President's elbow to give him smart answers to economic riddles or to tell him just what to do in every economic crisis or situation as it arises. Now I do not regard myself as $33\frac{1}{3}$ per cent of the Three Wise Men. I do not claim that the Council is composed of the three greatest economists in the United States or even that it includes any one of that sacred three. As I understand the matter, we have, by the vicissitudes of politics, been entrusted with the task of organizing an agency through which, over the years, the Chief Executive of the United States may see the economic situation and problems of the nation in its entirety and through professional eyes. It is the responsibility of this agency to process for his consideration the materials which should be of most use to him in laying out his policy and following his course of action with reference to the national economy.

It is incumbent on us, in the first place, to show good judgment as to how a small peak agency can be organized to synthesize a large and complicated body of data and interpretation so that it focuses effectively upon the issues which are at a given time most significant for future welfare. As to these issues, we must bring wise counsel to the projecting forward, modifying, or even at times reversing of the line of government policy and the selecting of lines and types of action or of nonaction which need to be understandingly adopted in the given situations.

It is incumbent upon us to lead in the development of a technique for continuous examination of the entire economy as a functioning and dynamic whole. We must show sense of perspective as between essentials and trivia and as to movement in time. We must have proper concern about the use of available indicators of the state of the nation's economic health or the flow of the national economic process—seen also in its international connections. At the same time, we must not allow our work shop to become cluttered with gadgets or ourselves so absorbed in reading gauges that we fail to apply our minds with insight and imagination to the total economic process, whose understanding requires both analytical and synthetic study of a most intensive kind.

It is incumbent on us to be informed as to the problems formulated, the methods in use or being developed, and the personnel who are doing the best critical and pioneer work in the various areas within the whole field of economic research, both theoretical exploration and practical application.

Under this interpretation of the Act, our agency should always remain a small assembly plant, using subassemblies, parts, and materials drawn from all corners of the field.

It is quite appropriate for you in due time and vigorously, as the work of the Council of Economic Advisers unfolds, to call attention to our failures adequately to exploit these materials or to any ineptness or bias in the way in which they are used. But before considering what critical role devolves upon you with reference to the functions of this agency, I trust you will ponder seriously your own responsibility for the range and quality of materials and of tools that you have provided or will provide for our use. From my standpoint as first chairman of this Council, appraising its potentialities for bringing economic light and guidance directly to the President but also indirectly to other parts of the executive establishment, to the Congress, and to the public, I cannot feel that economics in its present state is adequately prepared to render public service fully commensurate with this opportunity.

It is a threadbare and rather stupid joke to say that any two economists have, as to any economic issue, at least two opinions—if not three; or that if all the economists in the United States were laid end to end they would reach no conclusion. We of the craft know perfectly well how large an area of common understanding and agreement there is as to basic matters. We understand also the necessity and wholesomeness of arguing about every tentative conclusion which may be drawn along the frontier of dimly seen fact and exploratory interpretation that marks out the growth area of any discipline.

On the other hand, we must frankly admit to ourselves that often we have been too willing to content ourselves with puzzle-making and puzzle-breaking, all too prone to build up for ourselves areas of monopolistic competition in which we differentiated our intellectual products under conceptual terms that were often obscure and even confusing—sometimes intentionally so.

It would be both tedious and ungracious for me to elaborate the readily accessible details of this indictment. Both as an officer of this Association and as an official of the Social Science Research Council, I have in past years repeatedly raised my voice to deplore our slowness in undertaking measures to clarify our own understanding as to the state of knowledge within our discipline or to set up any organizational machinery through which supposed discoveries or accretions to that knowledge could go through some practicable process of exposition, challenge, and acceptance—even in that provisional sense in which truth may be regarded as “proven” in any area where scientific procedure is taken seriously.

The physician holds life or death in his hands. It has developed naturally, therefore, that his practices and the principles on which he bases them have been subjected to scrutiny and even a measure of control by his professional association. The engineer, on his part, is held

directly accountable for the outcome of expenditure made under his direction or for the safety of structures or of processes under his expert designing or operative direction. But we economists, in spite of the delicate and important character of the interests with which we deal, have been content with very loose and personal standards of professional responsibility. We have been pleased to build our private systems of thought and to offer them freely to the public through both private and governmental channels of dissemination with no formal and recognized procedures for checking upon their validity or the methods by which they had been formulated or tested.

May I suggest that the Employment Act of 1946, in opening the door of opportunity to the discipline of economics at the point of central policy consideration for the economy, lays upon the profession as such a deep responsibility? The conclusions, evaluations, and recommendations that the Council of Economic Advisers lay before the President should not merely be their own judgment, however well informed. It should be possible for us to say: "The conceptual tools, the analytical methods, the statistical techniques, the cause-and-result logic that we used have been duly examined and approved in the profession. Applied to certain problems by which the economy is confronted, they yield the following conclusions, and as to these issues we find widespread consensus." As to a second area, we might say: "There are certain newer concepts, more experimental methods, not generally accepted conclusions but clear divergence of opinion among well-qualified economists. Alternative conclusions as to these matters arise at such-and-such points and follow specified lines. We of the Council take the responsibility, after consideration with our staff and consultants, of making this or that recommendation on economic (not political) grounds." Or we might merely say: "We suggest that certain differing lines of action now being proposed could in our judgment be expected to lead to such-and-such divergent results."

When we have brought this sort of material to the President's desk, we shall have discharged our responsibilities under the Act as I conceive it. This much should be expected of us if we are to bring scientific procedure to contribute properly to the laying of the foundations on which national policy may wisely be formulated and action programmed. But to do this we need to be better informed than we now can be as to how great consensus there is among the profession concerning the nature of the economic processes involved and the direction and strength of cause-and-result sequences. Only so can we say that we have put our advisory service on the plane of a truly scientific agency.

It may perhaps be rejoined at this point that it is somewhat gratui-

tous for me to deplore deficiencies in the facilities and practices which our profession has provided for the scientific pursuit of economic truth when, as all are aware, the product has to go through the strainer of the Council of Economic Advisers and then be politically processed in the office of the Chief Executive and be reprocessed, again in a strongly political atmosphere, by the Congress. I think, however, that this situation should come as no shock to realistic men acquainted with and devoted to our democratic form of government. Nor should it dampen the ardor of their scientific quest for truth any more than the physicist, the chemist, or the bacteriologist should lose any of the excitement or the zeal of his quest just because he knows that physicians are sometimes stupid, lazy, or mercenary, and that engineers are sometimes venal, contractors dishonest, and industrialists unscrupulous. No stream can rise higher than its source, and it is essential that science press with unabated devotion its search for truth and its drive to learn how truth in the abstract may be made most effective in fashioning the institutions and guiding the conduct of common men.

I have presented a broad general picture of how economics in the public service may take full advantage of the opportunities opened to it by the Employment Act of 1946. If such an interpretation seems to you valid, you may quite properly ask that I follow through with at least a few suggestions as to ways in which the profession might make its work more definitely serviceable for national policy in 1947 and the years thereafter.

Never, I venture to guess, has so much economic theory, explicit and implicit, been written into an act which covers only four small pages. First there is the broad concept of stabilization of the economy or doing something positive, systematic, and effective about the course of general business activity. If this is a tenable objective and based on a sound theory, have we not a right to expect that the profession will validate it, and proceed from the general concept to means by which it can be attained? But if, in sober judgment, using the best data and critical tools at our disposal, it can be shown that the faith expressed in the Act and accepted by the Council and staff is in fact without adequate foundation, is it not the duty of this Association and its members to disabuse us and the public mind of this fallacy? Such a statement in terms of black and white is of course extreme. What we of the Council should more reasonably expect is that you give us a rigorously developed demonstration of the degree or kind of oscillation which necessarily inheres in an economy of free men operating within a highly dynamic technological and social situation. And what means and degrees of stabilization, over-all or component, are wholesome and practicable?

(1) To take a second case: the Employment Act is premised very definitely on a theory of maximum freedom of private enterprise. Combined with this, however, is a no less strong declaration of government responsibility for active and efficient utilization of resources, both natural and human. Before we can translate this concept of complementary phases of comprehensive organization of a vigorously functioning economy into appraisals and programs, we must know much more about the nature of economic enterprise, where it needs stimulating and where it needs curbing, and of how institutional or administrative provision may be made for either. Loud assertions are brought to our Council table by consultant groups as to the blighting effect of this action or the cumulative beneficence of that. But as to the real nature and force of human motivations and the pregnability of behavior patterns, our knowledge is woefully inadequate. Does this not reflect failure of economists to bring the resources of psychology to bear as fully as they might on the problems with which we economists must deal and the failure of psychologists to exploit adequately the field of economic behavior as an area for fruitful psychological study?

Both these comments on general *rapprochement* between the Employment Act and the economics profession focus on the over-all problems of a national economic entity. The disturbing events of two world wars with domestic boom and depression in between have led economists to do much thinking in recent years on the broad questions of whole economies and not merely on the processes of the individual and the firm.¹ But even three months' experience with the Council of Economic Advisers makes it clear that our economics is still only in the early stages of asking the questions and finding the answers that are truly pertinent to national aggregates and their functionally significant components.

It has often been pointed out that science advances on two legs; one the adumbration of illuminating analytical or synthetic *concepts*, and the other the devising of practical *methods*, techniques, or tools for exploring and testing these concepts and measuring the quantities or forces thus revealed. Questions of both concept and method are involved in the Employment Act. You are no doubt aware, for instance, that it is copiously bespangled with the phrase "purchasing power," and we are adjured to maximize it.

Here is a phrase that is as common as bread-and-butter. And I think it is quite probable that "maximum purchasing power" may prove to be an economic concept that will characterize a whole body of careful and vigorous economic research of the present and rising generation of

¹ Cf. Edwin G. Nourse, "Collective Bargaining and the Common Interest," *American Economic Review*, March, 1943.

economists. But today there is verbal warfare among those who attack the "purchasing power fallacy," those who pontificate on "fiscal policy," and those who find their Rock of Ages in "Say's Law." Can we not work out by peaceful means of scientific codification a catholic but precise formulation of the concept of purchasing power and its maximization in a sanely bargaining society of large and small administrative units, within the frame of responsible democratic government?

From concept we turn to tools. The Council finds ready to its hand or in process of development striking methodological tools such as the *tableau economique* or input-output analysis, the money-flow technique which Mr. Copeland will present later on this program, and the models of the "nation's economic budget." But these tools are not yet fully proven, tested, and accepted. What are the limits of each, and their relations to one another—overlapping, complementary, or conflicting? What is the place of aggregates, and how far must or can they be broken down to operationally meaningful detail?

I could go on indefinitely with the list of questions that the President quite reasonably is asking of his economic advisers, that we and our staff shall be converting into more articulate form in the idiom of the craft and turning to you for ever fuller and more precise answers. Let no one interpret my words as chiding because the answers are not at once forthcoming. We shall at best be a long time digging them out. The one thing I am suggesting is that the scientific mind tends to be diffusive. It goes everywhere in search of truth. But the Employment Act very properly is short focused. It clamors for all the help that you can give on the problems of today. It seeks to enlist economics in the public service.

In summary, the Council of Economic Advisers is not set up as a great research agency but as a very small synthesizing body, through which lines of inquiry can be initiated and conclusions and recommendations formulated. We undertake to answer some questions for the Executive. But we must be reconciled to the fact that we do not find ready to our hand enough factual knowledge or probative analysis on which to base these answers with the confidence that our scientific conscience yearns for or the seriousness of the issues demands. We turn, therefore, to the individual researchers and organized research groups, in the university, the research institute, the government bureau, and the corporation or the union research department. We ask you to consider deeply and systematically the nature of our needs and the means by which your research efforts may be made most adequately to serve those needs or most effectively to amplify or correct our understanding of what those needs really are. We invite you to consider what kind of consultative arrangement, justification conference, or clearing-house

organization might enable us mutually to effect helpful articulation of the several parts of the profession with the professional opportunity and responsibility so sharply defined for us by the Employment Act.

To be specific, can and should the Research Committee of this Association which has begun operations on a modest basis be organized and equipped to see that the scientific resources of economics are enlarged in proportion to the need as defined under the Employment Act and brought to serve that need as clearly and adequately as the resources of physical science are marshalled for its own advancement and made available to the service of the nation in time of war or in our peacetime technological development? Or should there be perchance a special committee on the Employment Act of 1946? Or would some less formalized procedure best serve our mutual needs?

Thus far, I have spoken entirely in terms of your role as research workers. A majority of you, however, are also, and in most cases primarily, teachers of economics. Even the worker in the research institute, government agency, or business connection is also a teacher through the written page and the spoken word of public address or more intimate conferences. If you believe that the step taken by the 79th Congress in setting up the procedure of a President's Economic Report and of servicing the Chief Executive through a Council of Economic Advisers is sound, I suggest that it is part of your educational function to see not merely that your students gain a clear understanding of the purpose and the procedure being developed but also that its work be understandably presented in discussion forums and other public meetings. You are in a strategic position to participate with and guide both students and public in the concurrent study of the economic situations which progressively emerge to challenge the attention and prescription of this agency. I urge that the laboratory work of every economics department should definitely include analysis of the recommendations being offered to Congress, the steps taken by Congress, and the discernible results of action programs and of government inaction, and all this tested against the major policy enunciated in the Employment Act—the highest practicable measure of utilization of our economic resources through voluntary private and complementary public means.

In exercising the research function of the economics profession, many differences as to *means* will come to light and be put in the way of helpful resolution. If, however, there be division among us as to the stated *end*, frank and vigorous exercise of the educational function will bring those differences to light and assist the citizens of a free country to take such alignment as they may wish.

As President Truman said on signing the measure: "The Employment Act of 1946 is not the end of the road, but rather the beginning.

TRACING MONEY FLOWS THROUGH THE UNITED STATES ECONOMY

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This is in the nature of a progress report on the National Bureau's *Exploratory Study of Money Flows*. I shall attempt to characterize broadly the measurements of money flows which are being developed, and to illustrate the ways in which they may be used in economic analysis.

The basic idea underlying the present approach is that money flows register themselves in the accounts of the business enterprises, the governments, and the various other transactors of which our economy consists, and that consequently we should be able to construct a picture of money flows out of accounting reports.

Accordingly the economy has been divided into a number of sectors, and approximate financial statements have been developed, one statement for each sector for each of the years 1936 through 1942. The form of financial statement employed is specially designed to reveal money flows.

The economy has been divided into ten sectors representing groupings of transactors. They are: (1) households; (2) nonfinancial corporations; (3) farms; (4) other nonfinancial private enterprises; (5) the federal government; (6) state and local governments; (7) the banking system; (8) stock and mutual life insurance companies; (9) other private insurance carriers; (10) miscellaneous financial enterprises. In addition to the financial statements for these ten sectors there is one for the rest of the world, which is a modification of the balance of international payments statement.

Broadly, it may be said that these eleven financial statements tell who has paid and who has received how much on account of various types of transactions or objects of payment. These objects of payment are: pay rolls; interest; cash dividends; entrepreneurial withdrawals; contract construction; rents and royalties; sales of commodities and business services not elsewhere classified; taxes; insurance premiums; insurance benefits; and grants, subsidies, and contributions.

The financial statements also show who owned and who owed how much on account of deposits and currency; on account of book credit; on account of bonds, notes, and debentures; et cetera.

Taken together the statements for the various transactor groups constitute a set of measurements that enable us to trace money flows through our economy.

Now, in order to portray money flows by estimating a financial statement for each group of transactors, we need a standard type of statement applicable to all of them. The form of statement adopted must be a kind of greatest common denominator of what we know, or can infer, about the transactions of all transactor groups.

Again, if it is to portray money flows, the statement should exclude transactions that a person enters into with himself, transactions that involve no money payment. Depreciation write-offs may serve to illustrate the type of non-money payment transaction that should be excluded. This means that the financial statements used to measure money flows should not be on an accrual basis; they should be on a cash basis, or something close to it.

Further, in designing the scheme of money flow measurements an important purpose has been to tie together what we know on the one hand about gross national product and what we know on the other hand about cash balances, government debt, consumer and farm credit, bank and insurance company portfolios, and the financial sources and uses of funds of industrial corporations. In other words, the attempt has been to develop a set of measurements which shall include all those money flows which play a substantive part in effecting over-all economic adjustments, a set of measurements which shall be sufficiently comprehensive to include, so far as money flows are concerned, all the statistical series necessary to supply an empirical basis for an aggregative approach to general equilibrium theory.¹ The aim has been a full-fledged system of national bookkeeping for money-payment transactions.

These considerations are responsible for the adoption of a form of financial statement that may strike accountants as somewhat novel. It is, however, a form which is implicit in a good deal of current economic analysis. It can be regarded as an extended version of the statement of sources and uses of funds. It will be called "a statement of payments and balances." Most of the essential features of this type of statement are illustrated by Table I, which presents estimates for households. These estimates of money flows and the others I shall present are preliminary and by no means final. They are taken from what we call our "trial balance."

The statement is divided into three main parts. Part One summarizes general receipts and expenditures; i.e., all household money flow transactions during the year except transactions in household port-

¹ No commitment is intended as to what sort of equilibrium concept such a theory should employ. Nor is any commitment intended as to whether a general theory should be an equilibrium theory. It is only intended to indicate the comprehensive scope of the measurements.

folios and transactions in the principal of household debt. Part Two gives a partial balance-sheet as of the year-end. It shows cash on hand, household portfolios (i.e., loans and securities on hand), household debt, and the net excess of cash and portfolios over debt (line *a*). Part Three gives a reconciliation. When this net-due-from-balance increases, as in 1941 and 1942, there is a net use of funds to extend credit to other transactors. Bank deposits as well as portfolios represent extensions of credit. This use of funds will be called "net loan funds placed." When the net-due-from-balance decreases there is a net financial source of funds called "net loan funds obtained." But the increment in the net-due-from balance (line *c*) is not quite the same as net loan funds placed or obtained, because actual net new borrowing by households is ordinarily greater² than the increment in gross debt outstanding—we must add to the increment in gross debt or subtract from line *c* an allowance for the debts that are forgiven during the year. Net loan funds placed or obtained are shown on lines *f* and *g*. When there is a net of loan funds obtained it is added to general receipts to give total sources of funds (line *h*); when there is a net of loan funds placed it is added to general expenditures to give total uses of funds (line *i*).

The three parts of the statement taken together are intended to give a summary accounting of all transactions affecting household cash balances. General receipts add to cash balances. General expenditures draw down cash balances, except to the minor extent that they may be financed by an increment in accounts payable. Cash balances may be replenished by new borrowing or by portfolio liquidations. Idle cash balances may be applied to debt retirement or to increase portfolios. Subject to the limitations imposed by inadequate data, the summary accounting of transactions affecting cash balances is complete. But data limitations are responsible for a discrepancy in these preliminary figures, the net amount of which is five billion dollars in 1942.

Table I presents a comprehensive picture of household finances which (when the estimates are tightened up after an analysis of the trial balance) should be useful for a variety of purposes. However, it should be noted that Table I presents household finances on a money flows basis; i.e., it is for most items on a cash basis.³ If we wish to know what households consumed, what they saved, or what their total claims

² Algebraically speaking.

³ The statements of payments and balances are not on a strictly cash basis. The deviation from a cash basis is substantially confined to two object-of-payment accounts—purchases and sales of goods and services not elsewhere classified and contract construction. It seems more useful for purposes of general economic analysis to show these accounts on a book-credit basis—to show purchases and accounts payable rather than settlements, and sales and accounts receivable rather than collections. Settlements and collections can be estimated on the basis of a statement of payments and balances, if it seems desirable to do so.

TABLE I
STATEMENT OF PAYMENTS AND BALANCE FOR HOUSEHOLDS
(Billions of Dollars)

	1935	1936	1937	1938	1939	1940	1941	1942
PART ONE: GENERAL RECEIPTS AND GENERAL EXPENDITURES DURING THE YEAR								
(All money payment transactions except portfolio transactions and transactions in the principal of household debt)								
B GENERAL RECEIPTS								
C Pay Roll (includes relief work).....	41.0	45.2	42.1	45.1	48.9	60.4	79.1	
D Interest and Dividends Received.....	7.5	7.6	6.1	6.6	6.8	7.3	6.5	
E Sales of Existing Assets and Secondhand Goods.....	0.9	0.9	0.9	0.9	0.9	1.0	0.9	
F Insurance Benefits.....	2.8	2.9	3.5	3.7	3.9	3.8	3.9	
G Public and Private Assistance Veterans Bonus and Pensions.....	3.5	1.3	1.5	1.6	1.6	1.6	1.6	
H Entrepreneurial Withdrawals.....	7.8	8.7	7.8	7.6	8.7	10.3	13.0	
I Total General Receipts (Money Income Payments to Individuals) (C through H) ¹	63.4	66.7	61.9	65.4	70.9	84.3	104.9	
J GENERAL EXPENDITURE:								
K Pay Roll (Domestic Servants, etc.).....	0.8	0.9	0.8	0.9	0.9	1.0	1.1	
L Interest Paid.....	1.4	1.4	1.3	1.3	1.4	1.5	1.3	
M Rent Paid by Tenants.....	3.9	4.2	4.4	4.6	4.8	5.2	5.5	
N Contract Construction (Owned Homes).....	0.6	0.7	0.8	1.0	1.1	1.4	0.7	
O Purchases of Goods and Services not elsewhere classified.....	48.3	51.4	48.5	51.3	55.0	63.7	70.2	
P Taxes, Fees, and Fines.....	2.4	3.4	3.4	3.1	3.4	4.0	6.9	
Q Insurance Premiums Paid.....	4.4	4.5	4.6	4.6	4.8	5.1	5.4	
R Contributions to Charities, Endowment, Gifts, Immigrant Remittances, etc.....	1.2	1.3	1.2	1.1	1.3	1.2	1.4	
S Total General Expenditures (K through R).....	62.9	67.8	64.9	67.9	72.7	83.0	92.5	
PART TWO: DEBT AND CREDIT POSITION AT THE END OF THE YEAR								
U Currency and Deposits.....	29.4	32.2	32.6	32.9	34.9	36.6	40.2	47.2
V Loans and Securities.....	120.3	118.7	117.7	117.5	116.9	115.8	117.7	125.2
W Total Due from Others (U+V).....	149.7	150.9	150.3	150.4	151.8	152.4	157.8	172.3
X Accounts Payable.....	2.6	3.1	3.4	3.4	3.6	3.9	4.2	3.2
Y Notes Payable and Mortgage Debt.....	20.0	20.1	19.9	19.5	20.2	21.1	21.8	19.4
Z Total Due to Others (X+Y).....	22.6	23.2	23.3	22.9	23.8	25.0	26.0	22.6
a Net Due from Balance (W-Z).....	127.1	127.7	127.0	127.5	128.0	127.3	131.8	149.7
PART THREE: RÉSUMÉ OF SOURCES AND USES OF FUNDS								
b Increment in Net Due—from Balance (Increment in a).....	0.6	-0.7	0.5	0.5	-0.7	4.5	17.9	
d Net Gain a/c Forgiven Debts.....	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
e Corrected Increment in Net Due—from Balance (c-d) ²	0.1	-1.2	0.0	0.0	-1.2	4.0	17.4	
f Net Loan Funds Obtained [(e) if e is <0].....	0	1.2	0.0	0	1.2	0	0	
g Net Loan Funds Placed [(e) if e is >0].....	0.1	0	0	0.0	0	4.0	17.4	
h Total Sources of Funds (I+f).....	63.4	67.9	61.9	65.4	72.1	84.3	104.9	
i Total Uses of Funds (S+g).....	63.0	67.8	64.9	67.9	72.7	87.0	109.9	
j Discrepancy (Use of Funds not Accounted for) (h-i).....	0.4	0.1	-3.0	-2.5	-0.6	-2.7	-5.0	
SUPPLEMENT: DISPOSABLE INCOME AND PURCHASES OF GROSS NATIONAL PRODUCT								
k Disposable Money Income [I-(P+Q)] ⁴	56.6	58.8	54.0	57.8	62.8	75.2	92.6	
m Purchases of Gross National Product (K+L+M+N+O).....	55.0	58.6	55.8	59.1	63.3	72.7	78.8	
n Contributions (R).....	1.2	1.3	1.2	1.1	1.3	1.2	1.4	
o Net Loan Funds Placed (e).....	0.1	-1.2	0	0	-1.2	4.0	17.4	
p Indicated Disposition of Disposable Money Income (m+n+o) ⁴	56.3	58.7	56.9	60.2	63.4	77.9	97.6	

WARNING: All figures from the Money Flows Study shown in this table are preliminary and subject to revision. They are based on a "Trial Balance" struck as of December 31, 1946. They are not released for publication.

N.B. Columns may not precisely dovetail due to rounding.

¹ Total includes tax refunds. These do not exceed \$49 millions in any year.

² The increment in the net due—from balance must be corrected to eliminate the effects of accounting revaluations of the items in Part Two. In the case of households the only correction needed is that for forgiven debts.

³ Less than \$50 millions.

⁴ Line l—line p=line j.

upon national wealth amounted to, we cannot get the answers to these questions from Table I alone. In each case we would need, in addition to the information on a money flows basis from Table I, to have information that involves accrual accounting. Money flows play a central role in organizing economic activity, but data on money flows report only a part of the quantitative information we need concerning our economy.

The item "general receipts" (line *I*) in the case of households may be called "money income payments to individuals." But it differs from the Commerce Department concept of *total* income payments to individuals in being confined to money payments. Thus it excludes imputed income (notably the value of farm produced food consumed at home); and it reports not entrepreneurial net income accruing but entrepreneurial net cash withdrawals. It also differs in that all insurance benefits are shown on a gross basis.

Many estimates of consumer expenditures attempt to put home owners and tenants on a par by including a money rent item for tenants and an imputed rent item for owner-occupants. Table I does not do this. Instead it includes for owner-occupants amounts under taxes and construction representing taxes and repairs on residences; it also includes under interest amounts for owner-occupant mortgage interest, and under procurement and construction amounts for the purchase of new owned homes and their facilities. On the other hand, it excludes landlord purchases of house fittings and equipment. Also the rent item shown on line *M* applies only to tenants.

If we deduct from total general receipts, taxes (line *P*) and insurance premiums (line *Q*) there remains what may be called "disposable money income." This is devoted to two main objects, purchases of the gross national product and charitable and other contributions. In the case of households, all general expenditures except taxes, insurance premiums, and contributions, represent purchases of gross national product.⁴ But in connection with gross national product purchases (line *m*) it is necessary to remind ourselves again that this item is on a money flows basis. It excludes imputed items such as farm produced food consumed at home.

Table I provides, for household purchases of gross national product, an analysis by object-of-payment. We might, if it is desired, superimpose on this breakdown another and more familiar one, a break between capital formation and current consumption expenditure. But for purposes of tracing money flows the object-of-payment breakdown has an advantage not shared by the capital-versus-current-expenditure break. This advantage lies in permitting a uniformity of accounting

⁴ Technically a part of insurance premiums should be included also.

classification as between transactors. Every general transaction involves a general receipt for some transactor and a general expenditure for some other transactor; with an object-of-payment breakdown we can classify the receipt in the statement of the one transactor and the expenditure in the statement of the other under the same object heading.⁵

An avowed purpose of the money flow measurements is to tie together what we know about gross national product and about the equity structure of our economy. So far as households are concerned, Table I provides a basis for relating the gross national product to equity structure. Household cash balances and portfolios represent equities in, or claims on, other transactors. Household accounts payable and other debts represent equities of other transactors in, or their claims upon, households. Households purchase a major part of the gross national product. When their disposable money income is not sufficient to cover such purchases plus contributions, the deficit must be financed by changes in the equity structure of the economy which decrease the net equity holdings of households. In this event the statement tells us to what extent cash balances have been drawn down, to what extent portfolios have been liquidated or household debts increased. If disposable money income exceeds household gross-national-product-purchases plus contributions, net equity holdings of households increase.⁶ In this event the statement tells us how much cash balances and portfolios have increased and how much net debt retirement has taken place. Table I reflects changes in our national equity structure affecting households, but it does so only to the extent that such changes involve money flows.

Line *e* is on a strictly cash basis. Thus, it does not reflect credits accruing to households on account of business savings or the increment in insurance reserves. Nor does it show net new direct investment of households; i.e., the excess of household gross capital formation over the accrual of depreciation on household property. Line *e* (loan funds placed) is therefore considerably less (algebraically) than total household savings. But net loan funds placed by households (line *e*) plus the increment in insurance reserves constitute what may be called the liquid savings of households. We shall presently approximate household liquid savings by adding net loan funds placed by households

⁵ In the case of business enterprises the capital and current expenditure break must be made in order to determine gross national product purchases, since for such transactors gross national product purchases are identical with capital expenditures. The familiar break in the case of households is unsatisfactory. We lack data on stocks of most household goods; the increment in these stocks is properly an item of capital formation but it has commonly been included under current consumption expenditure.

⁶ This statement is true theoretically, but the discrepancy may be sufficient to invalidate it.

and net loan funds placed by private life insurance companies.⁷

Estimates have been prepared to provide for the seven-year period a statement of payments and balances for each transactor group conforming to the general pattern of Table I. The statement for the federal government is of particular interest, because there has long been need for a comprehensive and comprehensible summary of federal fiscal operations. The statement covers the operations of government public service enterprises, credit agencies, and insurance funds, as well as general governmental functions. It reveals dealings with the public, not interagency transactions. It highlights the impact of fiscal policy on business conditions. It is hoped that this federal financial statement will be separately published in the near future.

The statement for each transactor group involves some special features. A few of these may be noted. For most groups all general transactions are shown, including transactions between members of the group.⁸ For example, on the statement for nonfinancial corporations, purchases by one corporation from another appear both as a receipt and as an expenditure. In technical accounting language, the statements are combined statements and not consolidated statements. However, there are two important exceptions to this rule. The banking system is treated as a single transactor; thus transactions between one bank and another are excluded from the statement for this group. Similarly, in the case of the rest of the world, transactions between one foreigner and another are excluded.

It has been said that the statement of payments and balances will appeal to accountants as novel. Since the statement of payments and balances for nonfinancial corporations follows the pattern of Table I, it differs radically from the conventional form of financial statement for such enterprises. But where the conventional operating statement and the opening and closing balance sheets provide appropriate detail, a statement of payments and balances can readily be derived from them.⁹ I shall not pause to explain this process of derivation. I shall merely note two major points of contrast between the conventional business financial statement and the statement of payments and balances. First, the conventional statement takes extensive cognizance of

⁷ A minor point is that loan funds placed by private life insurance companies are not quite the same as policy reserves accruing to households. A more important point is that this approximation does not take account of the reserves of fraternal orders and of the self-administered pension plans of local governments and private employers. The money flow measurements make it possible to do this, but it would have complicated the discussion below.

⁸ There is netting of general transactions within each group to a minor extent. This could not well be avoided with existing data, although theoretically it should be.

⁹ In published statements it is often difficult to separate money-payment transactions and non-money-payment transactions.

non-money payment transactions (such as depreciation write-offs) which the transactor enters into with himself. The statement of payments and balances is substantially confined to money payment transactions—transactions to which two transactors are parties. Second, the statement of payments and balances provides a computation of surplus or deficit—a surplus when general receipts exceed general expenditures, a deficit when the converse is the case. This computation must be sharply distinguished from the conventional accounting computation of corporate net income or deficit. General expenditures are likely to exceed general receipts when capital outlays on new plant and equipment and on inventory accumulations are large. When they do, the corporation will show a deficit in its general transactions account. This will often happen when the corporation has a substantial net income. In the case of households we found that total savings ordinarily considerably exceed net loan funds placed. In the case of business corporations the difference between a reckoning on an accrual basis and a reckoning on a money flows basis is even more marked. A corporation may engage in deficit financing in a money flows sense, i.e., may obtain loan funds to finance capital formation, when its income showing is in the black. And when it is in the red in accrual terms, it may curtail gross capital formation sufficiently to place loan funds; i.e., to build up its portfolio and its cash balance and retire obligations.

From the statements for the eleven transactor groups, we may compile an account for each object of general expenditure. Thus for commodities and business services we may show the purchases of each transactor group and the sales of each transactor group. Except for discrepancies and minor accounting technicalities this account should balance. Similarly we can compile approximately balancing accounts for the whole economy for each of the other ten objects of general expenditure: pay rolls, interest, taxes, insurance premiums, etc.

A roughly analogous situation prevails in the case of the balance sheet items shown. We can set up for the economy as a whole an account for cash, one for accounts receivable and payable, and one for loans and securities. In this third account, it is convenient to treat the paid-in capital of corporations as a form of corporate debt.

Theoretically we might expect each of these three balance sheet accounts to balance. But in this case, we must consider not only discrepancies of estimate but also differences in the timing and evaluation of the items. Thus in the cash balances account we must make allowance for what is known as the mail float. With this allowance,¹⁰ the

¹⁰ There is also a technical accounting difference to be reckoned with in the case of the Federal General Fund balance.

currency and deposit liabilities of the banking system should be equal to the total of the cash balances for the other ten transactor groups.

In addition to these three balance sheet accounts there is a fourth which involves the banking system and the rest of the world, the monetary gold stock account. This balance sheet account involves some special technical problems in the theory of social accounting that I shall pass over.

Finally we may compile from the eleven statements of payments and balances an account entitled "net loan funds obtained and placed." This account also, apart from discrepancies and accounting technicalities, should be in balance. In other words, for the economy as a whole, including the account with the rest of the world, the algebraic sum of the net loan funds obtained (positive and negative) for all eleven transactor groups should theoretically be zero. What one transactor borrows some other transactor must lend.

To summarize, the money flows measurements can be presented as a set of eleven statements of payments and balances, one statement for each transactor group. But since these statements follow a standard pattern the items can be rearranged and presented also as a set of over-all national accounts as follows: eleven object-of-payment accounts for general transactions¹¹; four balance sheet accounts¹²; one loan funds obtained and placed account.¹³

The eleven financial statements thus provide a means of tracing money flows in detail through the money circuit. And in doing this they afford a basis for studying a great many economic interrelationships.

We might examine the statement of payments and balances for each transactor group in turn and then proceed to examine each national object of expenditure account, each of the four national balance sheet accounts and the national net loan funds obtained and placed account. However, I shall not attempt to impose such a mass of figures on you; nor shall I attempt to discuss the sources and methods of estimate that have been used. Instead I propose to present some general exhibits which the eleven statements of payments and balances make possible, in order to illustrate how these statements may be used in economic analysis. Because we are skipping over details, we shall be compelled, in discussing these exhibits, to use various terms loosely, terms which the details would help us to define.

Now we have attempted to include in our money flow measurements all transactions which are pertinent to providing an empirical basis for

¹¹ There is an account giving very rough estimates for net real estate sales which for purposes of this paper is treated as combined with sales of commodities and services, n.e.c.

¹² There is actually another small balance sheet account for "treasury currency."

¹³ There is also a national account dealing with revaluation adjustments.

an aggregative approach to general equilibrium theory. But we have not included all money payment transactions. Thus we have omitted inter-bank transactions. We have also omitted a large volume of other transactions which may be said to "wash" so far as over-all economic adjustments are concerned.

We must recognize two kinds of money payment transactions: transactions which are substantive parts of the money circuit with which general equilibrium theory has been concerned and those which are not. We shall refer to the former as constituting the "main money circuit"

TABLE II
MAIN MONEY CIRCUIT TRANSACTIONS AND TECHNICAL TRANSACTIONS
(Debit Items—Billions of Dollars)

	1936	1937	1938	1939	1940	1941	1942
Total General Expenditures plus Net Loan Funds Placed							
A Households (Table I lines S+g).....	63.0	67.8	64.9	67.9	72.7	87.0	109.9
B The Federal Government.....	10.5	8.2	9.5	10.2	11.4	22.0	64.6
C The Banking System.....	2.1	2.3	2.2	2.3	2.4	2.5	2.5
D All Other Transactors.....	209.8	228.0	203.6	221.1	245.8	305.9	349.4
E Total Transactions in the Main Money Circuit (A through D).....	285.5	306.2	280.1	301.6	332.4	417.4	526.4
F Total Debit Transactions Except for the Banking System and the Federal Government (A+D).....	272.9	295.8	268.5	289.0	318.6	392.9	459.4
G Debits to Individual Accounts.....	628.0	650.0	556.0	592.0	627.0	756.0	864.0
H A Rough Estimate of Technical Transactions Included in Debits to Individual Accounts (H-G) ¹	355.1	354.2	287.5	303.0	308.4	363.1	404.7
J Ratio (in %) (I/E).....	124	116	103	100	93	87	77

WARNING: All figures from the Money Flows Study shown in this table are preliminary and subject to revision. They are based on a "Trial Balance" struck as of December 31, 1946. They are not released for publication.

N.B. Columns may not precisely dovetail due to rounding.

¹ It might be better to call this an estimate of the "fluff" in debits, i.e., of that part of debits which has no necessary relation to the volume of transactions in the Main Money Circuit. Line I does not include such money-changer transactions as checks cashed. It is presumably an underestimate of financial turnover transactions, agency transactions, and the intercity shifts by multi-establishment depositors of their bank balances.

Checks cashed and most other money-changer transactions except intercity and other shifts of bank balances reflect a substantial part of transactions settled by currency and by other means of payment. Line I assumes that such money-changer transactions and non-check settlements just offset each other. But the volume of non-check settlements probably materially exceeds the volume of such money-changer transactions; line I is an underestimate of the "fluff" in debits by the amount of this excess.

of the economy. We shall call the latter "technical transactions," since they may be thought of as having to do with the technique by which an economic adjustment is effected rather than as substantive to the adjustment itself.

Table II deals with the aggregate of all transactions included in the main money circuit. This aggregate includes all general expenditures of all transactors—all pay rolls, all purchases of tangible goods and of business services, and all expenditures for all other nonfinancial objects. It also includes the net loan funds placed by those transactor groups which show such a use of funds. Thus it represents a complete debit total for all transactions in the main money circuit. We could also draw off from the eleven statements of payments and balances a complete credit total.

Debits to individual accounts have often been taken as an approximate measure of the debit total of the money circuit. Actually they involve important omissions: general expenditures of the federal government and of the banking system and expenditure transactions not settled by drawing a check.¹⁴ But they also include a very much larger volume of transactions which, according to the definition here adopted, are not substantive parts of the main money circuit.

Table II shows estimated total debits to individual accounts, estimated total transactions in the main money circuit including those not covered by the debits series, and a rough estimate of the technical transactions included in the debits series. In 1937 the volume of these technical transactions was probably 25 per cent greater than that of the transactions in the main money circuit; in 1942 it was perhaps 20 per cent less.

There are three principal types of technical transactions included in debits to individual accounts:

1. Money-changer transactions. In this type of transaction the transactor makes a payment to himself, as when he cashes a check, buys foreign exchange, or transfers a balance from one bank to another.

2. Agency transactions. In this type of transaction transactor P makes a payment to transactor R through a third party A, who acts either as P's disbursing agent or as R's collection agent. Anyone who travels on a reimbursable expense account is involved in such transactions. An agency transaction involves two payments, P to A and A to R. For purposes of the money circuit the two have been counted as a single payment by P to R.

3. Financial turnover transactions. These turnover transactions make up the bulk of technical transactions. They include portfolio liquidations and new portfolio investments to the extent that such transactions offset each other. They also include repayments of indebtedness and new borrowing to the extent that these transactions offset each other. Thus it is here proposed to define the net increment in a transactor's portfolio as a part of the main money circuit, but to treat the turnover of these assets as technical transactions.¹⁵ Similarly, it is proposed to define the net increment in his indebtedness as a part of the main money circuit and to treat the turnover of these liabilities as technical transactions. It is expedient to draw the line between transactions included in the main money circuit and technical transactions in this way because present information regarding financial turnover transactions is inadequate; such transactions too frequently are not revealed

¹⁴ Chiefly transactions settled by currency or by offset.

¹⁵ A corresponding statement should be added to cover cash and receivables but it is necessarily somewhat more technical.

by financial statements. But this way of defining the main money circuit is dictated not merely by expediency; it has a firm economic basis. If we wish to probe the relation between transactions involved in current business operations and in acquiring new tangible assets on the one hand and transactions in receivables, portfolios, and indebtedness on the other, for nearly all transactors it is precisely the increments in receivables, portfolios, and indebtedness that are significant. It is the net effect of these increments that is summarized for households in Table I, Part Three, as net loan funds obtained or placed. If we know how much a transactor has borrowed from banks as of January 1 and his net additional borrowing during the year, we know what contribution such borrowing has made toward financing his general expenditures; and information regarding the gross volume of borrowings offset by repayments adds nothing so far as the amount of this contribution goes, though it does tell us something about the particular technique by which this contribution was accomplished.¹⁶ Similarly, if we know a transactor's portfolio on January 1 and the net increments in it during the year, we know how much of general receipts has gone to finance such credit extension; knowledge of his portfolio turnover adds nothing on this point, though it throws light on the transactor's technique of portfolio management.¹⁶

Broadly it is proposed to include in the main money circuit all transactions to which two transactors are parties, except money-changer transactions, agency transactions, and financial turnover transactions.

I do not mean to say that technical transactions have no effect upon the main money circuit. The larger the volume of money-changer transactions or bank-loan turnover transactions, the larger the handling costs to banks. But the effects of fluctuations in the volume of technical transactions on the volume of transactions in the main money circuit are quantitatively small, even minute. Among the largest of these is that of portfolio turnovers on the operating revenues of security dealers. Yet even in 1937-38 the total operating revenues of security dealers were less than one-tenth of 1 per cent of all transactions in the main money circuit. I believe we can profitably study the money circuit revealed by the eleven financial statements as if it were a substantially autonomous whole, hoping as we explore the interrelations among its parts, not to be seriously handicapped by our lack of detailed knowledge regarding the financial turnover transactions, agency transactions, or money-changer transactions not included in this main circuit.

I am suggesting that the money flow measurements provided by

¹⁶ These comments need some qualification as applied to a combined statement for a group of transactors. Loan funds placed by one transactor and loan funds obtained by another may offset each other.

statements of payments and balances for the various transactor groups constitute, so far as money flow data are concerned, a far more adequate basis for a general theory of employment, interest, and money than we have had hitherto, and that such a general theory can probably afford to get along without detailed knowledge of technical transactions.

But if our scheme of money flow measurements does not provide

TABLE III
GENERAL RECEIPTS AND EXPENDITURES, GROSS NATIONAL PRODUCT PURCHASES,
AND THE MOVEMENT OF LOAN FUNDS BY FOUR BROAD TRANSACTOR GROUPS
(Billions of Dollars)

	1936	1937	1938	1939	1940	1941	1942
A Households and Private Life Insurance Cos.							
B Total General Receipts.....	67.8	71.4	66.8	70.2	76.0	90.3	111.3
C Gross National Product Purchases.....	55.0	58.6	55.8	59.1	63.3	72.7	78.8
D Other General Expenditures (Taxes, Insurance Premiums, Contributions in the Case of Households).....	10.9	12.4	12.3	12.0	12.8	13.6	17.0
E Total General Expenditures (C+D).....	65.9	70.9	68.1	71.1	76.1	86.3	95.8
F Net Loan Funds Obtained ¹	-1.6	-0.2	-1.6	-1.6	-0.5	-6.2	-19.8
G The Federal Government							
H Total General Receipts.....	5.6	8.2	8.3	7.9	8.8	12.5	23.1
I Gross National Product Purchases.....	6.0	5.5	6.3	6.9	7.9	18.1	50.1
J Other General Expenditures.....	4.5	2.7	3.2	3.3	3.5	3.9	8.5
K Total General Expenditures (I+J).....	10.5	8.2	9.5	10.2	11.4	22.0	64.6
L Net Loan Funds Obtained ¹	5.0	0.3	1.3	2.2	2.4	10.1	41.2
M Nonfinancial Corporations							
N Total General Receipts.....	122.3	132.1	112.1	124.4	139.0	180.6	209.5
O Gross National Product Purchases.....	6.1	6.4	2.7	5.4	7.5	10.5	4.1
P Other General Expenditures.....	115.0	126.0	107.0	117.2	130.1	166.4	194.8
Q Total General Expenditures (O+P).....	121.2	132.4	109.8	122.6	137.6	176.9	198.9
R Net Loan Funds Obtained ¹	0.4	2.3	-2.3	-1.7	-1.7	-4.4	-10.7
S All Other Transactors (except the Banking Sys- tem)							
I Total General Receipts.....	82.5	90.7	84.2	90.2	98.4	117.6	130.8
U Gross National Product Purchases.....	13.1	13.8	13.6	14.4	15.9	17.0	12.8
V Other General Expenditures.....	67.5	76.6	70.6	76.3	83.7	100.3	110.6
W Total General Expenditures (U+V).....	80.7	90.5	84.2	90.7	99.6	117.3	123.4
X Net Loan Funds Obtained ¹	-3.5	0.6	-1.5	-0.3	-0.8	-0.6	-10.8
Y							
Z Total Gross National Product Purchases—All Transactors except the Banking System (C+I+O+U) ²	80.2	84.3	78.4	85.8	94.6	118.4	151.8

WARNING: All figures from the Money Flows Study shown in this table are preliminary and subject to revision. They are based on a "Trial Balance" struck as of December 31, 1946. They are not released for publication.

¹ Apart from discrepancies Net Loan Funds Obtained should be equal to General Expenditures minus General Receipts for each of the four broad transactor groups.

² Gross National Product Purchases are less than total gross national product by the amount of (a) the imputed items included in the total and (b) purchases of gross national product by the Banking System. The latter is very small. The largest item under the former is value of farm produced food consumed at home.

details regarding technical transactions, Table II does show that the aggregate of technical transactions sometimes exceeds the aggregate of transactions in the main money circuit and that the relationship between the two is somewhat eccentric. These two facts are important. Those who have sought to discover the key to the relation between the quantity of money and the level of commodity prices by examining the relation between aggregate debits to individual accounts and aggregate gross national product should bear in mind that technical transactions are a major fraction of all debits to individual accounts and that their relation to total transactions in the main money circuit is eccentric.

In examining the statement for households we were able to show that part of the gross national product purchased by households and how households financed this purchase. We can do the same for other transactor groups. In Table III a summary picture of the gross national product, or rather of that part of it which passes through the market,¹⁷ is shown. For convenience a number of the transactor groups have been combined. Here, life insurance carriers have been combined with households, and Table III shows for these two groups together total general receipts, purchases of the gross national product, other general expenditures, total general expenditures, and net loan funds obtained or placed. Similar information is presented for three other groups: (1) nonfinancial corporations; (2) the federal government; and (3) all other transactors except the banking system. When households and life insurance companies are combined, the increase in the item "Purchases of Gross National Product" over that in Table I is scarcely appreciable. General receipts and other general expenditures are materially larger. The item, "Net Loan Funds Placed," now approximates what may be called household liquid savings.¹⁸ It is this fact, plus the slight change in gross national product purchases, that makes it seem convenient to group life insurance companies with households.

Table III tells half the story. It shows how much of the gross national product each group purchased and how much financing was involved. Table IV analyzes how the financing was done.

Table IV presents for households and for each of the other three broad transactor groups, the following information: (1) Currency and deposits. (2) Receivables plus loans and securities. (3) Indebtedness to the banking system. (4) Other indebtedness, including in the case of corporations the amount of paid-in capital. (5) The net I.O.U. position; that is, the excess of 3 + 4 over 1 + 2. (6) Net loan funds obtained or placed. Net loan funds obtained represents the increment in net indebtedness (or net due-to balance) after correcting the computation of this increment to exclude the effect of accounting revaluations during the year.

These two tables tell us broadly who purchased the gross national product and how such purchases were financed. I shall not attempt to interpret these two tables fully, but rather to direct your attention to a few outstanding points:

1. Between 1936 and 1937 federal government general receipts expanded and general expenditures contracted. Net financing was about

¹⁷ The small amount purchased by the banking system is omitted for the sake of simplicity.

¹⁸ It differs from the SEC concept of liquid savings in that its computation takes into account home mortgage debt and in that the SEC computation takes into account cash balances and portfolios of unincorporated business and government insurance reserves.

five billion dollars in 1936. (Table III, line *L*). Not far from half of this financing was accomplished by drawing down the federal cash balance and by increasing indebtedness to banks (Table IV, lines *I* and

TABLE IV
CASH AND CREDIT, DEBT TO BANKS, DEBT TO OTHERS, AND THE MOVEMENT OF
LOAN FUNDS BY FOUR BROAD TRANSACTOR GROUPS
(Billions of Dollars)

	1935	1936	1937	1938	1939	1940	1941	1942
A Households and Private Life Insurance Cos.								
B Cash.....	30.2	33.1	33.4	33.7	35.8	37.6	41.0	47.9
C Receivables plus Loans and Securities.....	139.7	139.6	140.0	141.2	142.0	142.4	146.5	156.6
D Due to Banks ²	3.8	4.1	4.4	4.5	4.8	5.2	5.6	5.1
E Total Due to Other than Banks	18.8	19.1	18.9	18.4	19.0	19.9	20.4	17.5
F Net Due—to Balance (D+E—[B+C]).....	-147.3	-149.5	-150.1	-152.0	-154.0	-155.0	-161.6	-181.8
G Net Loan Funds Obtained ¹ ... The Federal Government		-1.6	-0.2	-1.6	-1.6	-0.5	-6.2	-19.8
H Cash.....	0.4	0.2	1.2	1.4	0.8	0.2	1.9	8.9
I Receivables plus Loans and Securities.....	12.0	11.2	10.9	10.9	10.7	11.2	11.7	12.3
J Due to Banks ²	19.5	21.5	20.7	22.1	23.5	25.0	29.7	54.4
K Total Due to Other than Banks	16.1	18.1	19.9	20.0	20.6	21.3	28.9	53.1
L Net Due—to Balance (K+L—[I+J]).....	23.1	28.2	28.5	29.8	32.7	34.8	45.0	86.4
M Net Loan Funds Obtained ¹ ... Nonfinancial Corporations		5.0	0.3	1.3	2.2	2.4	10.1	41.2
N Cash.....	8.5	8.9	8.1	9.0	10.0	11.9	12.8	16.1
O Receivables plus Loans and Securities.....	39.8	40.4	38.8	38.4	39.4	41.0	46.1	51.5
P Due to Banks ²	5.8	6.6	6.4	5.8	5.7	6.0	6.2	6.4
Q Total Due to Other than Banks	110.6	111.8	112.4	112.5	113.4	115.4	118.2	116.3
R Net Due—to Balance (R+S—[P+Q]).....	68.1	69.1	71.9	70.8	69.8	68.5	65.5	55.1
S Net Loan Funds Obtained ¹ ... All Other Transactors (except the Banking System)		0.4	2.3	-2.3	-1.7	-1.7	-4.4	-10.7
T Cash.....	12.9	14.2	14.4	15.3	17.2	20.1	21.5	25.6
U Receivables plus Loans and Securities.....	66.1	68.1	69.7	69.9	71.7	75.5	78.4	77.1
V Due to Banks ²	19.7	21.8	22.9	24.2	27.4	32.6	34.8	31.3
W Total Due to Other than Banks	90.3	87.1	87.8	86.2	85.6	84.3	86.1	82.1
X Net Due—to Balance (W+X—[U+V]).....	31.0	27.6	28.6	27.6	27.7	27.3	27.1	16.6
Y Net Loan Funds Obtained ¹ ... The Banking System on Own Account ³		-3.5	0.6	-1.5	-0.3	-0.8	-0.6	-10.8
Z Total Net Loan Funds Obtained—All Transactors except the Banking System ³ (G+N+U+Y).....		0.4	3.0	-4.0	-1.3	-0.6	-1.1	-0.2
a Net Loan Funds Placed by the Banking System on Own Account ³		0.3	0.4	0.3	0.4	0.6	0.5	0.6

WARNING: All figures from the Money Flows Study shown in this table are preliminary and subject to revision. They are based on a "Trial Balance" struck as of December 31, 1946. They are not released for publication.

¹ Net Loan Funds Obtained for each of the four broad transactor groups equals the increment in the Net Due to Balance corrected to eliminate the effects of accounting revaluations of receivables, loans and securities, and indebtedness.

² Net Loan Funds Obtained through the Banking System by each of the four transactor groups may be computed approximately from the items cash and due to banks. It equals the increment in due to banks minus the increment in cash minus a correction. The correction equals the increment in deposit mail float plus the increment in bank stock held.

³ The difference between line *d* and line *e* represents discrepancies in estimates.

K); in 1937 net financing was negligible. The contraction in federal expenditures was partly in purchases of the gross national product, more largely in transfer payments—the veterans' bonus was paid in 1936. The 1936-37 shift in federal fiscal policy has been thought by

many to have played an important part in instigating the sharp contraction in business purchases of the gross national product beginning in the fourth quarter of 1937. The money flow measurements afford support for such an interpretation.

2. Between 1937 and 1938 purchases of the gross national product by nonfinancial corporations declined by about three and a half billion dollars (Table III, line *O*); and while in 1937 these corporations did about two billions of financing, in 1938 they placed about two billions of loan funds net (Table III, line *R*). Purchases of the gross national product by households and life insurance companies also declined in 1938 (Table III, line *C*). The decline in purchases of the gross national product by nonfinancial corporations was accompanied by a strengthening of their financial position; they built up cash balances and retired indebtedness in 1938 (Table IV, lines *P* and *R*). But the decline in gross national product purchases by households took place in spite of the fact that household saving was largely confined to accumulation of insurance reserves (Table IV, line *G*, and Table I, line *g*). Money flow measurements alone can tell only a part of the story of business fluctuations, but so far as they go they appear to indicate that at this stage in the decline of gross-national-product-purchases, nonfinancial corporations took the initiative while households contracted their purchases in response to a contraction in money income payments to individuals.

3. Between 1939 and 1942 federal purchases of the gross national product expanded rapidly owing to the war effort. This expansion involved a large amount of deficit financing in a money flow sense¹⁹ (Table III, line *L*).

4. When a transactor group expands its purchases of the gross national product and has recourse to deficit financing in a money flows sense²⁰ the other transactor groups inevitably contribute just enough in the way of financing to meet the deficit. For all transactor groups together total general receipts approximately equal total general expenditures, and net loan funds obtained approximately equal net loan funds placed. One transactor group can therefore initiate an expansion of its purchases of the gross national product by means of deficit financing,²⁰ as the federal government did during the war, and so give an impetus to the expansion of the total gross national product. The funds such a group needs to borrow because its general expenditures exceed its general receipts necessarily equal the funds other groups have to lend because their general receipts exceed their general expenditures.²¹

¹⁹ On this meaning of deficit cf. above. "Deficit financing" is commonly used in about this sense for government but not for business.

²⁰ On this meaning of deficit cf. above.

²¹ Cf. *Treasury Bulletin*, April, 1946, pp. A-11 to A-20. A corresponding statement can be made regarding contractions in business activity.

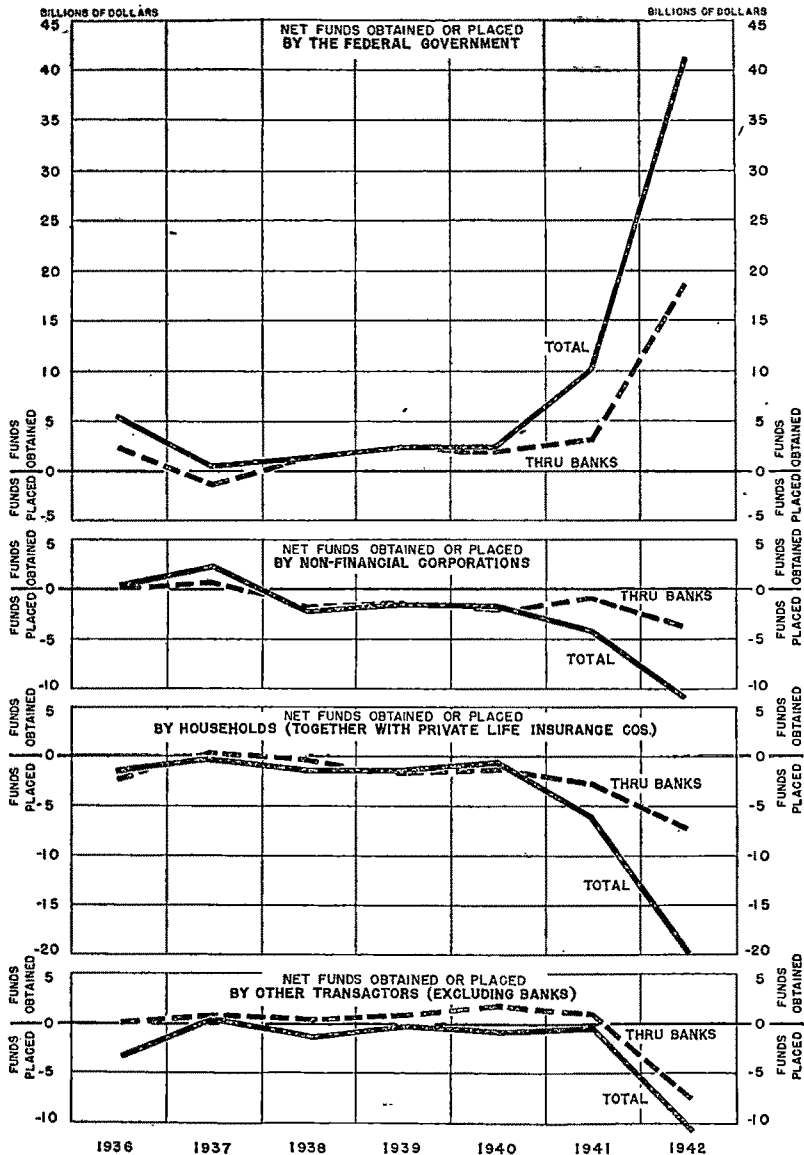
5. A major part in the financing of year-to-year changes in gross national product purchases is played by the banking system. We may compute the net funds obtained or placed by households (and life insurance companies) through the banking system if we make appropriate allowance for the deposit mail float. Net indebtedness to the banking system equals line *D* minus line *B* minus the mail float.²² Funds obtained through the banking system represent the increment in this net indebtedness to the banking system. Similar computations can be made for the other three broad groups.²² The chart shows the funds obtained or placed through the banking system by each of the four broad transactor groups (the four broken lines). The distance above the zero line on each grid represents funds obtained by transactors; the distance below, funds placed. The solid line on each grid represents total funds obtained or placed. Most of the time the broken line and the solid line on each of the three upper grids are close together; during the war they move apart. Thus, while the government obtained and households placed a substantial volume of funds through the banking system in 1941-42 it is clear that households, and other groups also, increased their direct holdings of government debt materially after 1940. The spread between the two lines on the bottom grid reflects the peculiarities of the international movements of funds. In these movements the United States banking system plays a smaller part than it does in loan fund movements inside the United States.

6. The banking system is often said to create credit. This expression has misled some people into believing that the banking system can create or extinguish loan funds at will. The chart makes clear that the banking system does no such thing. For the most part it acts merely as a middleman, receiving loan funds from some transactors and turning them over to others. But it is a middleman strategically situated to fix the terms on which much financing is done, and hence to serve as an instrument for effectuating public policy respecting business conditions.

7. The fact that in the movements of loan funds the banking system plays the role of a middleman can be restated as follows. The sum of the ordinates for the four solid lines should, apart from discrepancies (which are substantial in these preliminary figures), be only slightly greater than zero. Similarly the sum of the ordinates for the four broken lines should be only slightly greater than zero. Loan funds obtained should only slightly exceed loan funds placed. I shall mention only one of the reasons why the two should be not quite equal. The chart omits loan funds placed by the banking system on its own account; i.e., the funds it saves from its current operations. The small amount of loan

²² Letters refer to Table IV. Theoretically we should take account of changes in the bank stock held by other transactors in making this computation. This refinement makes little difference. In the figures for the chart it has been taken into account.

THE ROLE OF THE BANKING SYSTEM IN THE MOVEMENT OF LOAN FUNDS



Net loan funds obtained = not credit newly extended by others less not credit newly extended to others.

Much of the time most loan funds move through the Banking System. (Much of the time the solid and broken lines are close together). During the War a large volume of loan funds moved through other channels. (The solid line is considerably above the broken line on the top grid; the solid line is below the broken line on each of the other grids). Other channels were important before the War for the international movement of funds. (The spread between the two lines on the bottom grid reflects this).

For all four grids together loan funds placed should - apart from discrepancies - be nearly equal to loan funds obtained, - i.e., for either the solid lines or the broken lines the sum of the four ordinates should be not much above zero.

funds placed by the banking system on its own account is shown on the last line of Table IV—three to six hundred million dollars.

Obviously these scattered comments represent only a start toward analyzing the measurements of money flows and indicating their implications. I hope, however, that these comments are sufficient to convey some impression of how widely useful in economic analysis we may expect this type of money flow measurement to be, when it is more fully developed. But at this early stage in a maiden effort at a comprehensive system of national bookkeeping it is difficult for us to gauge its potential usefulness properly.

THE ECONOMIC OUTLOOK¹

OF FRIDAY AND EDIE AND AYRES

When the ancients sought omens and prayers
To eradicate harassing cares
They turned to the Sphinx;
We flavor our jinks
With Friday and Edie and Ayres.

Trailing truth to its ultimate lairs,
By Fate never caught unawares,
This trio of mine
Can the future divine,
Can Friday and Edie and Ayres.

If the market's ephemeral wares
Bring woe, and foreboding despairs,
Use the bold divinations
And prognostications
Of Friday and Edie and Ayres.

You may play with the bulls or the bears,
Buy common or preference shares;
But when margins decline
Give heed to the line
Of Friday and Edie and Ayres.

When the outcome with estimate squares
Then Lady Luck pays all the fares;
When a bad throw is cast
Why, the buck can be passed
From Friday, to Edie, to Ayres.

The ancient, oracular prayers
Were but tangled and tortuous snares;
Your two-timing sibyl
Could stoop to a quibble,
Not Friday, or Edie, or Ayres.

For meticulous splitting of hairs
You must go to the pedagogues' chairs,
There's no ambiguity
Or aught of vacuity
In Friday, or Edie, or Ayres.

If the world and its tangled affairs
Are in exigent need of repairs,
Abandon all hope?
No, imbibe all the dope
From Friday and Edie and Ayres.

When Gabriel's trumpeted blares
End man's immemorial cares,
And Earth wakes from its trance,
You'll get word, in advance,
From Friday and Edie and Ayres.

FREDERICK C. MILLS

¹The Chairman opened the session by reading the above poem which was originally presented without warning by its author at the evening session on December 27, 1937, read by President W. Randolph Burgess, of the American Statistical Association, at the "Business Prospects" dinner on December 29, and is published here in response to many insistent requests.—Editor.

PLANNING AND FORECASTING IN THE TRANSITION PERIOD —

By WOODLIEF THOMAS

Board of Governors of the Federal Reserve System

Formal discussion of the economic outlook by economists at meetings of professional associations is a long-established practice. In the twenties a luncheon session devoted to this subject was a regular feature of the program of the American Statistical Association, which at that time dealt to a large extent with economic realities—such as when to buy stocks—while the Economic Association meetings were more concerned with the hypotheses of neoclassical theories. There seems now to have been a change—the statisticians are emphasizing hypothetical mathematical formulae and the economists are greatly concerned with the immediately current problem of the public debt.

Since the twenties, when these forecasting luncheons were the most popular of all meetings, particularly if held within the proximity of Wall Street, there have been great changes in the objectives and procedures of economic analysis. At that time the aim was to predict the course of events that was presumably the result of freely operating competitive forces in the markets with little influence from public controls. Since then we have had more widespread acceptance of the view that economic forces and events can be planned and controlled toward certain objectives. In line with those views and because of the pressures of a great depression, government has instituted many more regulations and restrictives and has adopted stimulative measures aimed to relieve distress and to minimize fluctuations in employment and incomes.

This important change in the institutional structure of the economy necessarily modifies both the function and the task of forecasting. During the depression of the thirties, after a period of floundering in the hope that free private enterprise would finally touch solid bottom and be able to walk out of the slough, since it was too burdened with debt and tradition to swim, government took over. At first it almost smothered the poor victim with a superabundance of aids, some of which were misdirected. After this development an important aspect of forecasting was to predict governmental policies—especially the budget. In time private activities and judgments again became significant but on the whole continued too timid and uncertain to dominate the picture as they had in the twenties.

Then came the war and governmental activities became completely dominant. Forecasting was relatively easy, because the problem was

primarily one of measuring the capacity of the economy to produce and of appraising the ability of government to keep private spending and market prices under control.

The postwar transition brought the first real test of planning and of forecasting in a partially planned economy when private activity needed no special stimulus. Viewing the results from this still rather close point, it appears that the test was not wholly favorable for either planning or forecasting, especially from the standpoint of the public's attitude toward these activities. It is important for economists to consider why this was true. A great many papers have been written on this subject and at another session devoted to the subject of transition forecasts, Frank Garfield's excellent paper seems to me to point out the principal deficiencies of the official forecasts made shortly after V-J Day for the transition period. These forecasts influenced although they did not completely determine the planning that was done and the policies adopted for that period and the public's viewpoint toward those policies.

Economic Developments in Transition Period. What happened? That question brings me to the assignment given me on this program: a review of recent developments that might provide the background for the forecasts to follow. The story of what happened is generally familiar. The President in his first Economic Report transmitted to Congress on January 8, 1947, as required under the Employment Act of 1946, has provided a comprehensive, yet concise, and an accurate description and analysis of the events. Time does not permit the presentation of a complete story here, nor is it needed for this audience. I shall only mention some of the more important developments that have a particular bearing on this problem of planning and forecasting.

Upon the termination of hostilities there was a lot of uncertainty and difference of opinion as to what would be the trend of economic events in the transition period. It was freely predicted that there would be a considerable volume of unemployment and at the same time there were fears of inflation. It was known that there would be a decline of 70 billion dollars in the annual rate of federal government expenditures, which had been accounting for about half of the total output of the country. It was certain that large numbers of war workers were going to be thrown out of jobs, that many would be released from the armed forces, and that reconversion in some lines would take considerable time. At the same time it was known that supplies of all sorts of goods and services were small and that the public in general had a lot of money to spend. Whether they were going to spend it in a sufficient amount to create all the employment needed was the important question. Some views tended to emphasize the available buying

power, and the limited supplies of goods, while others were impressed by the employment problem.

We know now which course the buying public chose to take. We know that the consumer determined the trend of events. We might say that mistaken predictions on the part of many were, to use a popular advertising slogan, because they "underestimated the power of a woman." The consumer, in general, is responsible for the fact that there has been so much employment and that we had such pressure on prices.

Federal government expenditures declined in accordance with expectations from an annual rate of above 100 billion dollars a year to below 40 billion. Government expenditures are now close to a stabilized level and are approximately balanced by receipts, so that the government is no longer the dominant stimulative factor in the economy.

Private expenditures, at the same time, increased much more rapidly and by much larger amounts than was generally anticipated. The decline in government expenditures was at first more rapid than the increase in private expenditures and there was some decrease in over-all production and income. This decrease, however, did little more than reflect the reduction in working hours and in overtime pay, other relaxations of wartime pressures for maximum efforts, and the shifting of people and equipment from one task to another. There was relatively little unemployment, considering the nature of the readjustments being made, and no relaxation of pressures of large demand on short supply.

Expansion of consumer expenditures was, as I stated, the outstanding development in the transition period. It was far beyond previous expectations. Expenditures on nondurable goods and services, which continued at a high level throughout the war, expanded further, although the growth in the latter part of 1946 was probably not as great as the rise in prices, indicating some decline in physical volume. Consumer buying of durable goods expanded rapidly with increased production of such goods, but continued below accumulated demands and potential capacity for production.

Some forecasters in 1945 expected that there would be a sharper decline in incomes than actually occurred and an accompanying decline in consumer expenditures for nondurable goods. The anticipated increase in supplies and purchases of durable goods was expected to curtail buying of nondurable goods. These declines did not take place. The simplest guide for forecasting consumer expenditures for 1946, as during the war, was the total supply available multiplied by the highest prices the sellers were willing or were permitted to ask. No correlations to income separately derived were needed.

Total consumer expenditures are now abnormally large, not only

in dollar amount and in volume of goods and services, but with reference to the level of individual incomes, which are also at a high level. The net current savings of individuals, that is, the excess of income after taxes over consumer expenditures, have been sharply reduced since the end of the war. Net savings are currently at an annual rate of about 15 billion dollars, compared with a peak wartime level of nearly 40 billion dollars. The ratio of current net savings to disposable income is now below 10 per cent, compared with the wartime peak of nearly 25 per cent and prewar rates of less than 10 per cent.

This change in savings is an important factor in the immediate outlook. In this connection, however, it is significant and should be emphasized that these figures represent net current savings; that is, the difference between gross new savings by all individuals and current drafts on past savings. With the tremendous volume of liquid assets accumulated during the war, withdrawals from past savings might be expected to be much larger than would normally be the case. Hence past experience may continue to be an unreliable guide.

The willingness of people to draw upon their past savings to purchase durable goods has had and will continue to have an important bearing upon the volume of consumer demands. Liquid-asset surveys made for the Federal Reserve Board show that although people planned at the beginning of 1946 to spend only relatively small percentages of their total holdings, the amounts that they expected to spend were substantial with reference to the supply of goods available. This was a better forecast than those made by some economists.

Withdrawals from savings were unquestionably tremendous in 1946—gross redemptions of 6 billion of Series E savings bonds give an indication. In view of the rise in prices that has occurred and the purchases already made, the outlook for 1947 may be different. The next survey to be taken in January should indicate the extent to which the events of the past year have altered intentions. Current forecasts must allow for this factor.

Another important factor maintaining consumer expenditures at a high level relative to income, particularly those for durable goods, has been the rapid expansion in consumer credit. This expansion is likely to continue as more durable goods become available. Were it not for Regulation W, the expansion, and subsequent contraction, would be more rapid. Payments to veterans, including terminal leave compensation and veterans loans, have also been an important source of consumer income likely to be spent rapidly. Many of these will not recur in the future.

Expenditures for private capital formation, which were at a very low level during the war, have subsequently expanded to an annual

rate of about 30 billion dollars, compared with prewar figures of around 15 billion dollars or less a year. These totals include expenditures for a great variety of purposes.

Residential construction has expanded rapidly; expenditures for this purpose are now far above the maximum for any year in the thirties and new contracts awarded this year have been well above the peaks of the twenties. To some extent this increase reflects higher prices, and the volume of building may be little above the level of the late thirties. Practically all of the new housing construction recently started was under the Veterans Emergency Program. The question for the future is whether the present high costs of building will cause deferment of demand for housing.

Nonresidential construction rose much more sharply than residential building following the end of the war and the termination of allocations and of permit requirements by the war agencies. Controls were subsequently reimposed and these activities were curtailed, but the actual expenditures on projects started or to be permitted continued large. Recently controls have been relaxed. Business is also buying new equipment in large amounts. Shortages are substantial in many lines and expenditures for producers' durable goods have been rising as fast as production could be expanded. What are the prospects for continuation of such a large amount of expenditures for industrial and commercial construction and equipment?

Business inventories, which were seriously reduced during the war in civilian goods lines, expanded at a rapid rate during 1946. Much of the large increase in recent months has reflected rising prices. This increase in inventories has been one of the most important stimulating factors in the recent expansion of incomes, and a slackening in that rate, which is certain to come eventually, will produce an important change in the situation. When can we expect the end of inventory expansion?

Exports of goods from this country have continued large and could be much greater if current demands were met. They reached a peak at an annual rate of 12 billion dollars a year, while imports have been below a 6 billion rate. American goods are in great demand and it appears that supply of goods rather than dollar exchange is still the most important limiting factor.

The most important and significant development of the transition period was the sharp rise in commodity prices that occurred in the last half of 1946. Prices were gradually rising during OPA controls, but with suspension of those controls last summer there was an immediate sharp upward spurt and another one followed the lifting of controls in October. Prices of agricultural products rose to about 250 per cent of the

prewar level; they rose more than during the last war and in fact the increase in the six months May to November was as great as in three years from the middle of 1917 to the peak of 1920. Agricultural prices are now higher than at the 1920 peak.

Wholesale prices of industrial products have not risen during this war by anything like as much as they did in the last war—about 50 per cent compared with over 150 per cent—but further increases of these products are probably yet to be recorded. Retail prices of food, clothing, and many other nondurable goods have nearly doubled since 1939, and prices of durable goods have risen by about 50 per cent, while rents and many utility charges have shown little increase. The total cost-of-living index is up about 50 per cent.

During 1946 the country was faced with the alternative of further price inflation of a more serious nature than had occurred during the war or of rigid economic controls of a degree and character exceptional in our history. There was no other alternative because at the controlled level of prices demand was certain to be in excess of available supplies that could be provided in any short period of time. An attempt was made to maintain controls, but they were inadequate and in the end the course of inflation was chosen. The price rise that has occurred may surely be called inflation. Whether or not the consequences of this inflation of prices will be similar to those that have followed previous inflationary booms of similar scope is a question which the subsequent speakers are supposed to answer.

Responsibility of Planning and Forecasting. Other questions of concern to us as economists are whether the course of events might have been changed by more careful—or more fortunate—planning and forecasting and what lessons might be learned from recent events as to the future of these two functions of economists.

It may be said that incorrect forecasts were an influence in determining economic and other policies of government, of private business, and of labor, and in influencing the views of the public regarding those policies. In general a large number of persons who favored planning and controls as matters of public policy and some of those responsible for the controls adopted were guided by expectations of the future that turned out to be incorrect. The situation was one which required, if inflation was to be avoided, the most careful controls of a degree and stringency far beyond any previous experience in this country and of a nature widely believed to be contrary to our basic principles of government.

Official policies, it should be emphasized, were only to a small extent guided by the implications of the forecasts of increased unemployment and, on the whole, gave recognition to the dangers inherent in the

situation and endeavored to maintain controls. Whether or not it was feasible or sound policy under the circumstances to maintain and enforce such controls in this country is a question which will be debated for many years. Events show that in the year 1946 it was politically if not economically impossible.

There was an important group of people, both vocal and numerous, who decried the forecasts of unemployment but at the same time opposed all planning and controls and claimed that the "free play of competitive forces" could solve all problems. It was not always clear whether they thought this course would permit a transition from war to peace without depression or without inflation, or whether they believed that one or the other of these consequences was inevitable in any event and would be less disastrous than the controls needed to prevent them.

In the light of events it seems clear that under the situation existing, in which demands at existing prices were far in excess of any supplies that could be attained in a short period of time, the "free play of competitive forces" would inevitably result in a rise of prices to a level far above what could be maintained when supplies again became available. This is what I would call inflation.

Conclusion. Whatever one may think of the justice and reasonableness of the decisions, it appears from the events of 1946 that the people of this country are not yet willing to accept economic planning, or at any rate the adoption of all the controls that such planning may indicate to be advisable. We cannot, therefore, rely upon an all-wise government to direct us in the paths toward permanent prosperity and full employment. Individual and business decisions will continue to be of great importance. As a basis for informed decisions, such guidance as the forecasts of economists can provide will be required. Under the circumstances, there will be sufficient unstabilizing elements in the economy to provide plenty of fluctuations to predict.

THE OUTLOOK FOR INCOMES AND SPENDING

By RAGNAR D. NAESS

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We are entering the year 1947 under conditions that are in many respects unprecedented in our economic history. Many comparisons have been made between the present situation and the conditions after the first World War and, perhaps, the present situation is more similar to the period immediately following the first World War than any other period that comes readily to mind.

New Records in the Midst of Widespread Apprehension. In terms of the national income and spending concepts, we are making new records for all time, including the war years. Employment is at the war peak and every economic indicator reads prosperity in capital letters. In the face of all this we hear that the situation is unhealthy and ripe for a decline, labeled as anything from a modest readjustment to a serious depression. Never before during a period of intense prosperity was there so much talk about a business recession or depression. This talk reflects a lack of confidence and a fear of the future. Even the conservative trend in politics and the evident intent of Congress to attempt to resolve some of the political conflicts in favor of business does not seem to instill any sustained enthusiasm or confidence on the part of capital.

This state of affairs has led to an outburst of predictions of widely divergent content and quality, reminding one of the Tower of Babel in the confusion they engender.

This psychological and emotional state flows from the very situation in which we find ourselves. On the one hand, our economy is supported by powerful factors that are still operating fully to give us the unprecedented level of activity and national income. On the other hand, many of these very factors are necessarily, to a considerable degree, of a transitory nature, and once some of the major positive forces are partly or fully exhausted it is clear that we will be faced with many difficult problems.

Powerful Economic Forces Still Dominating Economy. At this time we are dealing with the prospects for 1947 which greatly eases and facilitates the task of diagnosis. This is because we enter the year with such powerful economic forces that for a considerable portion of the year, at least, the economy as a whole will continue to develop along the same lines as during the last part of 1946.

Capital Formation at a Very High Rate. We are all more or less familiar with these powerful forces. I shall deal with capital formation first. Foremost is the intense demand on the part of industry for new

plant and equipment. Expenditures for producers' durable equipment at the present time are running almost three times prewar and 75 per cent higher than in 1941. Among the important elements that provide strength and force to a rising and high level of business the expenditures for plant and equipment by private industry surely ranks near the top. Among these expenditures it is difficult to pick any particular field as outstanding. Practically every field—ranging from factory machinery, electrical equipment, office appliances, through farm implements, trucks, railroad equipment, and to commercial and industrial construction—is enjoying unprecedented activity. Perhaps the machine tool industry is behind the parade but, if so, only because it is not running at the enormous rate of some of the others. Among these industries it is important to note that aircraft manufacturing, including military aircraft, is a relatively new, large-scale contributor to the economy and that the demand for producers' durable equipment for military needs must also be reckoned with as a new and important factor in our post-war world.

The expenditures for producers' durable equipment during the year 1947 will exceed those of 1946, but it is doubtful that the current rate will increase to any degree. Orders in this broad field of activity are no longer increasing and, if anything, are showing a declining tendency. Unfilled orders are still very large and activity will continue at a high rate for some months, with the peak likely to occur during the first six months.

The second stimulating factor in the present rate of capital formation which has contributed much to our present prosperity is net exports of goods and services. The outlook for net exports of goods and services during this year is less easily determined. On the one hand, we know the enormous needs abroad that will continue for several years; but, on the other hand, we also know the difficulties that we are faced with in order to translate these needs into business for American industry. Both political and economic factors are of the greatest importance in this field. The temporary stimulus through lend-lease, the activities of UNRRA, and some increase in imports resulting from our high rate of activity at home are the most important factors that will make for a smaller net export balance of goods and services during the remainder of this year. Considering all aspects, it does not seem likely that this particular stimulus to our economy will continue throughout the year as powerful as it is now.

The third important economic factor in capital formation that has greatly contributed to the rise in business has been accumulation of inventories. At the end of the war inventories of civilian products were low and a wholesale transfer of war inventories took place from private

industry to the federal government. Since that time inventories have increased at a very rapid rate. About half the increase has been due to price increases and half a result of an increase in physical stocks. Much publicity has been given the inventories. A rise in inventories in itself is normal during any period of rapid business expansion. It is only when a basic change takes place in the economic trend that inventories become burdensome. Inventories are "high" or "low" depending upon the economic situation as a whole, and not upon their absolute level at any given time regardless of other considerations. It is quite clear that the process of building inventories is temporary. Once the basic situation changes this process will be reversed and will exert a negative influence upon our economy rather than the strongly positive influence that has prevailed, particularly during recent months.

These three important elements in the present situation—the extremely high rate of capital expenditures by industry, the large net export balance of goods and services, and the rapid accumulation of inventories—are so important because of their peculiar leverage effect on all other sections of our economy: They all provide a large volume of employment and incomes without any offset in consumers goods and services that will have to be taken off the market within our domestic economy. In all three a peak is likely to be reached some time this year. For the year as a whole their combined contribution to our economy should be about the same as last year.

Release of Consumer's Spending Dominated Economy Since End of War. When we turn to the other divisions of our economy we find conditions of activity perhaps even greater than those that characterize the sections already discussed. We are all familiar with the developments in the field of consumers goods since the end of the war. The outstanding development, in its impact on national income, was the release of spending for goods and services by the consumer. The need for goods, the accumulated savings, the rapid increases in income payments, and the sharp reduction in the current rate of savings brought about an increase in consumer expenditures of almost 30 per cent within twelve months.

Consumer's Goods Industries Becoming Much More Vulnerable. Until last fall the position of the consumer goods industries as a whole was extremely strong. Large wage increases early in the year came when consumer goods shortages were still acute. Widespread strikes made it impossible to effect a speedy reconversion. The result was a great increase in the inflationary pressure in our economy. The consumer was, in effect, subsidized by an abnormal rate of income in relation to the gross national product. Corporate profits were far below normal in relation to national income in a number of industries, while in other

industries not subject to strikes and shortages profits were far greater than normal.

The end of price controls and other war controls changed the picture drastically. During the fall, prices rose sharply and income payments to individuals improved at a relatively slow rate. At the present time, therefore, on the basis of the current output of consumers goods and services at the prevailing level of prices, it is becoming clear that a large further rise in income payments to individuals is necessary in order to prevent a glut in many consumers goods markets. The position of the consumer goods industries is now rapidly becoming vulnerable. This is perhaps the greatest change that has occurred in our economy in the last six months.

Obviously, the position of consumers durable goods is far stronger than that of consumers nondurable goods. The widespread markdowns in soft goods are merely an indication of the vulnerable position of this part of our economy. These markdowns are, of course, in part normal at this time of the year and may not necessarily reflect the beginning of a downward trend in the entire price level. In fact, commodity prices as a whole are still rising despite the decline in prices of farm products and the increasing disparity in the movement of prices of individual commodities. It is clear, however, that the present trends cannot last long before a more general downward movement will occur. It is unlikely that income payments to individuals will increase enough to enable the market to absorb the increasing flow of consumers goods at present prices, even with a larger-than-normal rate of spending out of income, somewhat lower personal income taxes, and a continuation of the rising scale of the use of consumer credit. Further wage increases and some moderate further increase in employment may increase national income payments during the next few months; but on the other hand, lower farm prices will mean somewhat lower farm income. Price weakness this year in consumers nondurable goods and later in the year in consumers durable goods seems a very likely development.

As in the case of consumers goods and services generally, residential building is also in a much less favorable position than a year ago. Here again, the cost factor is proving to be a real obstacle. Housing on a vast scale, as desired and demanded in many quarters, is impossible under present cost conditions. Even with the favorable credit terms available it is unlikely that residential construction can improve from present levels without substantially lower cost of building materials and a reduction in other costs of building that are now so abnormal.

Government Spending Will Be Moderately Lower. Finally, the last element to be discussed in appraising 1947 is that of government spending. We all know that the trend of federal spending will be downward,

although the reduction is likely to be gradual and there may be very little reduction in the next twelve months. Some increase in state and local government spending is bound to occur in view of the needs of municipalities and states to make up for deferred maintenance during the war years. Federal, state, and municipal expenditures for public works are increasing but are still relatively low. States and municipalities are planning large expenditures once labor and materials become available, and if business should decline the federal government will probably increase expenditures substantially. This year, however, public works expenditures are unlikely to be significant. On the whole, therefore, governmental spending is likely to remain of about the same importance during the year as it is now.

Our Economy Close to an Immediate Postwar Peak. Looking at the composite of all of these various basic parts of our economy, we find that at the present time we are running at an extremely high level that can only be characterized as an abnormal boom and that in practically all of the segments of the economy we are developing elements of instability. The boom is so great and has such momentum that its force can only be spent gradually and, therefore, there is but little doubt that the year 1947 as a whole will be highly prosperous.

In fact, if we had time to go into details of the analysis of national income and expenditures we would find that many of the figures will be almost as good as, or in some cases better than, in the year 1946.

	1946	1947
	(In Billions of Dollars)	
Government expenditures for goods and services	38	35
Private capital formation	29	30
Consumer purchases	125	130
Gross national product	192	195
Income payments to individuals	165	164
Personal taxes and nontax payments	19	17
Disposable income of individuals	146	147
Consumer purchases	125	130
Consumers' savings	21	17
Retail sales	96	100

These estimates for 1947 are obviously bound to be in error. They are based on the assumption that the position of consumers durable goods and housing is strong enough to stimulate the use of a great deal of additional consumer credit and that the consumer will spend a larger than normal part of his income.

On the face of it these figures are highly favorable and suggest that the year 1947 will be one of great prosperity. It is likely that these figures will prove to be misleading for it is not the level of the year as

a whole that is important, but the trend during the year. The year 1946 was one of sharply rising gross national product, income payments to individuals, production, and prices. The year 1947 may easily prove to be one during which the trend of these items will be downward for a considerable part of the year. At the present time gross national product is probably running at between 215 and 225-billion dollars a year, national income payments at between 175 and 180 billions and total retail sales between 105 and 110 billions a year. These figures are all substantially higher than the average level suggested for the year 1947. This year may go down in history as the year of the immediate postwar peak in business. If that should happen, it still remains to be seen how severe any business decline will be that may start during the year.

THE BUSINESS OUTLOOK

By ALAN H. TEMPLE

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For more than six years, counting from the first defense program after the fall of France in 1940, our economy has been dominated by inflationary influences. At the beginning of 1947 we face the fact that the inflationary boom shows many signs of having reached, or nearly reached, its crest. During 1946 the price rise reached a peak in the stock market and the bond market. It reached a peak in furs, liquors, precious metals, objects of art, and other luxury goods and services. It reached a peak in most foods and farm products, and the reaction in prices of many foods has been substantial. Probably the rise in textile and apparel prices also has about reached its peak although confirmation must be awaited. Probably, also, real estate prices, or at least some kinds of real estate prices, have attained their peak.

The inflationary price rise may not have reached its peak in metal prices, but the top, if not at hand, is in all likelihood not many months away. It probably has not reached its peak in manufactured goods as a group, because of the influence of metal prices and wage costs in this group. It has not reached its peak in wage rates, probably not in the BLS wholesale commodity price index and probably not in the consumers price index. What is now happening, however, particularly in agricultural prices, suggests that the peaks of these price indexes are not very far away.

The expansion in the supply of money, which has been the prime cause of the price inflation, cannot be said with certainty to have reached its end, but the increase in privately-owned bank deposits and currency during 1946 was slight in magnitude as well as percentage. The transactions of the federal Treasury in 1947 will tend to reduce the money supply, through use of a cash surplus to retire debt from the banks. Private transactions will tend to expand the money supply. On balance, any further rise in the money supply seems unlikely to reach significant proportions, but a significant contraction is perhaps even less likely.

This is a formidable list of statements to hurl at you in a few brief sentences. What they indicate, in summary, is that the inflationary price rise is no longer general, but irregular; that peaks are being reached, seriatim, and reactions setting in; that the rise as a whole has gone almost as far as we should expect it to go; and finally that the fundamental cause of the price inflation—the increase in the money supply—is also at or approaching its maximum.

For 1947, therefore, we have to consider the significance and portents of these changes. Will the peak that seems in sight be followed by a drop into a valley of depression, or shall we merely move, as we must hope, on to a safer path where the footing is sound and where we can still maintain something close to our present rate of trade, production, and employment?

The end of a boom may be due to one or more of several causes. One experience is that the money runs out—that further expansion of volume and prices cannot be financed. Businessmen may run out of money and banks out of reserves upon which they could expand credit. This is not the case today, and I shall refer later to monetary and financial influences as among the factors tending to sustain and prolong activity.

A second way in which booms come to an end is through the influence of some extraneous event; for example, something which might profoundly alter investment decisions, or a drastic change in the export-import balance. The present situation seems to me relatively free from these types of extraneous disturbance also.

This spiral is moving to its end mainly because, like every other spiral in history, it has created within itself the maladjustments, chiefly in the form of distortions of price and income relationships, which bring it to a halt. It has brought, in recent months particularly, a rapid and extreme rise in living costs against a modest increase in per capita disposable income, which leaves less purchasing power for noncost-of-living items. The principal maladjustments seem to be three in number.

First, some prices are clearly too high. They are too high in relation to the purchasing power of too many people who have to buy the product or they are too high in relation to their cost of production. For both reasons they may be too high to equate supply and demand in the year ahead. Therefore they are vulnerable. A good many agricultural prices are in this category. From 1939 to the present, agricultural prices have risen some 154 per cent (BLS), as against 54 per cent in nonagricultural prices. I do not suggest that this is a precise measure of imbalance, for agricultural prices were doubtless too low at the start of the war. The point, however, is that they are vulnerable because there is a very good chance that supply-demand relationships will not support such prices in the next year or two. This vulnerability has been demonstrated already in cotton, in the grains, in many foods, and it will surely be demonstrated in other areas as time goes on.

A second, although related, type of maladjustment is excessive production costs resulting from increases in money wages not supported by equivalent increases in productivity. In most lines the consequences of excessive production costs have not yet presented themselves, for sellers' markets—swollen by deferred needs and accumulated liquid

assets—have temporarily solved cost-price problems. The fact remains that the balance is precarious and dependent upon maintenance of very high volumes. Break-even points are high. The wages of labor in the manufacturing industries are 79 per cent higher than before the war on an hourly basis, and 91 per cent higher on a weekly basis. Prices based on these wages have not stopped the farmer, whose cash income in 1946 was 188 per cent higher, from buying manufactured products. But the farmer faces a smaller income, and even now prices curtail the buying of a large group of people, ranging from some clerical and professional workers whose disposable incomes have not kept pace with cost-of-living increases to persons or institutions dependent upon income from fixed interest securities. In extreme cases this last group has lost one-half of its purchasing power. At some point these distortions must have their effect. The most concrete and visible evidence of excessive production costs, menacing the activation of demand, is in construction.

Indirect and hidden price increases also demand correction. These are attributable to overfinishing, to quality deterioration, to substitution of inferior materials, and to shifts from low-priced to high-priced lines and from staples to expensive novelties. These shifts have been the expected consequence of wartime difficulty in getting materials, and of OPA regulation and sellers' markets which made overfinishing and shifting of lines profitable. They have raised prices relative to quality and utility, and thus they have made their contribution to price distortion.

The third possible maladjustment is in the accumulation of inventory, which in the past year has amounted to about 8 billion dollars. This total figure is not worrisome. It compares with an increase of $11\frac{1}{2}$ billions in the 1919-20 episode, and the total is below normal relationships with sales and shipments. The trouble is that the inventories are notoriously short in many lines and piled up in others. In other words, they are unbalanced. Forecasters expecting a business decline put stress upon inventory accumulation on the ground that it has swollen the demand in the markets, and that when it ceases there will be a smaller outlet for production unless other demands rise to a compensating extent. This is true, but it is not the last word on the matter. For if prices and incomes are in balance and the pattern of production fits the demands of the buyers, there is never any reason why buying cannot absorb full production. This may not give us a different answer but it puts the emphasis on other aspects of the outlook; namely, the balance in costs, prices, and income relationships.

To state the nature of our principal maladjustments itself indicates the kind of corrections needed. One is a realignment of production to

meet consumers' preferences and of prices to meet consumers' pocketbooks—those that are not too well filled as well as those that are bulging. This is a problem which now faces the general merchandise trades. Included in it is the elimination of excess and substandard merchandise from inventory. The era in which picture frames and plastic ash trays and rayon sport shirts could hold up sales, though staple clothing and household equipment were unavailable, has come to an end. The reestablishment of price lines to fit peacetime pocketbooks may not be accomplished without friction because it will run up against the high cost of manufacturing. Retailers today are telling manufacturers they must get their prices down and their quality up, and manufacturers reply that their costs will not come down because the wages they pay are still going up. Both may exaggerate in their arguments, and doubtless they will get together, but manufacturers and their workers should take warning from what the retailers say. For with or without conscious analysis, the retailer is reporting an unbalance in the terms of exchange between various population groups—a distortion in price relationships, which menaces trade.

The country needs lower food prices and it is getting them. Declines in prices of farm products may mean moderately smaller incomes for farmers, even though production is huge as now expected. Nevertheless, the net effect of lower food prices upon the economy should be beneficial. Farmers as a group are in unprecedentedly good financial shape, with reduced debt and increased liquid assets. They have had a greater rise in income and buying power than most other elements of the population. Any general survey would conclude that they can stand a modest loss of income through price declines better than the rest of the people can stand a continuation of present living costs.

In the industries the need is to improve the efficiency of output, reduce unit costs of industrial products, and pass the saving along in lower prices in which everyone can share. To bring this about is the most urgent problem of management and labor in 1947 and the extent to which it may or may not be accomplished is the year's greatest enigma. Any forecast that 1947 will be a good year must be based in final analysis on a belief that through good sense and mutual adjustment a workable answer will be found to the wage question.

I take an optimistic view as to the ability of the economy to make these adjustments without real depression, and indeed without more than moderate recession so far as the next twelve months are concerned. We received violent and spectacular warning last September, in the stock market, that a new appraisal of the business outlook was in order. One of the last words written by General Ayres, to whom you have listened so often on this program, was that if a depression comes

it will be the most widely heralded in history. Retailers are getting their stocks and commitments down and they are buying cautiously. Manufacturers have a markedly more conservative attitude toward inventory accumulation than they had six months ago. I believe that 1947 will be a year of resumption of historical progress in industrial productivity. The action of the Ford Motor Company in cutting prices is in expectation of this as well as an act of business statesmanship in every other respect.

In turning to a direct appraisal of the 1947 outlook, therefore, my first point is that we are not marching heedlessly up to the precipice. Beneficial adjustments are already under way. They are coming along piecemeal—in inventory balancing and price reductions—instead of being deferred and bunched together at some future time, in which case they would be incomparably more disturbing.

My second main point in direct appraisal is that the environment in which necessary corrections will be carried out is in many respects extraordinarily favorable. Any inquiry into the state of the capital goods industries today shows that the demand for most of their products is still enormous. Manufacturers are worried about production, not sales, and their customers are worried about when they will get deliveries. Behind this drive for industrial expansion and improvement are wartime obsolescence, technological progress, need of mechanization to offset high wage costs, availability of funds, and optimistic estimates of markets.

Most forecasts of construction activity project a good increase in 1947 over 1946. These estimates are well grounded on increased production of materials and breaking of bottlenecks. A more even flow of materials to the construction site will help immensely in reducing exorbitant construction costs. In consumers' durable goods the markets are equally strong.

Another important supporting factor is the virtual certainty that 1947 will be another year of large export surplus. This country would have exported much more in 1946 if the goods had been available, and in the export markets there is a conjunction of needs—gold, dollars, and credits—to sustain shipments in 1947. We should not underestimate the supporting influence on the industries, such as textiles, which promise to catch up with domestic needs during the year.

I suggested earlier that monetary and financial influences are of a kind to support a prolonged high activity. The money supply is turning over slowly and could support more trade and production and still higher prices if people should decide to turn it over faster. It can be expanded further by making more bank loans if deserving borrowers come forward, for there is no strain on bank reserves and little possi-

bility that the central banking authorities will rigorously restrict credit. The money supply is backed by an unparalleled volume of liquid assets readily convertible into money. Moreover, the money supply is most unlikely to shrink by any substantial extent in any nearby period, for the increase in bank deposits has come about chiefly through government borrowing from the banks and to that extent can be retraced only by repaying the borrowing. Three kinds of bank credit have expanded during 1946—business loans, real estate loans, and consumer credit. By present indications all will expand further.

The financial strength and liquidity of the economy as a whole and of most of its segments, the size of the money supply, its almost unshrinkable character, and the slow rate of money turnover should all give assurance against general or major liquidation.

The welfare of the country in 1947 will be measured, as always, by its production and distribution of useful goods rather than by price or dollar income criteria. Price declines need be deplored only if they lead to curtailment of trade, production, and employment. The declines that appear to be ahead of us in 1947 should not have that effect on any broad scale. They are in areas where necessary adjustments are made through price changes rather than production changes. A free system is capable of making some of the adjustments now called for; namely, the shift from expensive novelties and overfinished goods back to staples, without real disturbance. Friction will arise, however, where consumer demand for lower prices runs against a stone wall of inflexible costs.

It is to be doubted that textiles, shoes, and soft goods generally, as well as some of the lighter consumers' durables, can maintain present rates of production throughout 1947, for inelasticities of consumption will begin to operate. It is also doubtful that any labor and resources released from production in these areas can be fully picked up in construction and the heavy goods. There is much evidence, however, that little decline in production even of soft goods is to be expected before late spring or summer and that most of the decline later in the year will be confined to these goods.

If you will study the weighting of the Federal Reserve index of industrial production you will find that liberal allowances for a decline in soft goods would still take no more than 15 points out of this index, and I should not expect the drop in other components to be any more than that. Since it is possible that the index will reach 190 before a turn comes, I should consider that 160 would be as low as it is likely to go in any month of 1947.

In terms of income flow, I think it reasonable to assume that whatever amounts government takes out of the income stream through its cash

transactions will be replaced, and more, by expansion of consumer credit, real estate loans, and commercial credit. The gap, as it is called, which will develop when inventory accumulation ceases unless there is an offsetting rise in other expenditures, does not disturb me greatly. For I recall that demand for both consumer and capital goods was going unsatisfied while inventories were being accumulated and if the balance in price and income relationships improves, buying can expand to fill the gap. Farm income will decline, but a dollar drop in the consumer's food cost will mean a dollar spent on something else; likewise with every dollar of tax cut, if taxes are cut. To the extent that the consumer saves, I feel confident that those to whom he entrusts his savings will put them to work. This is no time to be concerned with oversaving or to worry about a dearth of investment opportunities. For they abound on all sides—in residential construction and consumers' durable goods as well as in capital goods.

ECONOMIC FORECASTS TRANSITION FORECASTS IN REVIEW

By FRANK R. GARFIELD

Board of Governors of the Federal Reserve System

Addressing the American Statistical Association in 1927, Edmund Day noted two extreme views of business forecasting: one that "when given scientific form" business forecasting is to be regarded as "a sort of malpractice" and the other that "in business forecasting is to be found one of the most valuable lines of endeavor in the entire field of social science—a line in which realism, objectivity and adequacy of treatment are compelled by the very nature of the problems encountered; a line in which weaknesses of procedure are most mercilessly exposed and high standards of performance most effectively enforced." He advocated continuous public appraisal of results no matter what boards of directors and vice-presidents might think.

During the past twenty years business forecasts have developed into economic forecasts and have come to be much more widely used in determination—or at least rationalization—of private and public policies. Meanwhile forecasting methods have changed considerably under the impact of developments in affairs and doctrines such as no one foresaw in 1927. Many new data have been compiled, and many experiments have been made in combining data to reveal the secrets of the future. Forecasters have checked and rechecked their own thinking and that of their colleagues. But they have continued to disagree on major points in their forecasts, sometimes because of differences in judgment as to what has already happened and sometimes because of differences in judgment concerning the best way to use knowledge of the past in forecasting the future. More specifically, differences in forecasts have reflected in part basic underlying differences of view on such matters as the maturity of the economy, the extent of competition in the modern world, the impact of price changes, and the importance of monetary and credit factors. Moreover, differences of view as to desirable policies for the economy continue to exist among forecasters and seem at times to exert a subtle influence on their ideas as to what will happen. All things considered, forecasting still appears to be in a fairly early stage of development and the experience of the transition period tends to confirm this view. The need for continuous public appraisal is still very evident. But what does this appraisal involve?

Appraisal Problems. Two broad questions may be posed first: (1) What should be included in general economic forecasts? (2) What sort of accuracy should be expected? The first question in turn may be

broken down into questions concerning the subjects and time periods to be included and the nature of "predictions" or "projections" to be made. Answers to all these questions must be affected by consideration of the markets which forecasters have for their wares and the crystal balls which they have available for observation.

As already noted, markets for forecasts have broadened, and general forecasts preferably should include estimates of such things as unemployment, even if they are subject to greater percentage errors than estimates of production and employment. Where government policies are an important element in the situation, as in the case of price controls after the war and likewise of price supports in the period ahead, forecasts should be made as to the effects of these policies. Wage rates and profits as well as prices should be forecast. As to time periods, forecasts are sometimes needed for long periods, sometimes only for short periods. Even in long-term forecasts, intensive analysis of short-time developments may prove very useful, providing a basis for estimating the cumulative effects of developments before the long term arrives. Also, to a degree, short-time forecasts need to be made with possible longer-term developments in mind; but there seems to have been too much of this in forecasting the transition period.

Controversy over the use of terms like prediction or projection to describe the nature of forecasts may be fruitless and certainly the chief interest is in the nature of the forecasts themselves. Clearly the forecaster should recognize and state his major assumptions and indicate the role he ascribes to them. One of these assumptions has to do with the accuracy of relationships among the parts, as, for example, between disposable income and expenditures on nondurable goods. This was one of the most important assumptions in the gross product expenditure-receipts forecasts for the transition period that turned out not to be so. If the term projection implies that such relationships can be relied upon in all periods, it is open to real question. Also, if it tends to relieve the forecaster of responsibility for specified assumptions, it is open to question. In the end, the purpose is to forecast probable developments as a basis for policy determination—public or private—and anyone who provides a single set of projections based on assumptions he regards as most likely is engaged in forecasting. Since this is so, a term like prediction would seem more descriptive. Unfortunately, this term has been used widely by people who have done very little analysis and provide very little content. Perhaps forecast is a better word than either prediction or projection.

On the question of accuracy, it seems evident that the goal should be estimates which are accurate rather than conservative (from the point of view of some argument). The term accurate, however, implies

more precision than is feasible and if the approximate nature of forecasts were recognized at all stages it might be that some of the time spent on decimal points could be more profitably utilized. Factors affecting the sort of accuracy to be expected include the nature of the times, of the forecasts, and of the reactions to the forecasts; and they also include the nature of the data available and the date lines enforced.

Now two less general questions may be asked. First, is the forecasting experience of the transition period really worth reviewing, considering the unusual conditions prevailing? The answer is yes. Forecasting is of unusual importance in periods of great change, such as this, and any methodology not flexible enough to cover such periods needs to be re-examined. Second, what forecasts should be selected for consideration? The number of forecasts, general or detailed, published or unpublished, by economists or laymen, was legion. Perhaps three broad views of the prospect as of August, 1945, may be distinguished, not counting the view that the situation was complicated and only time would tell.

Three General Views of Transition Prospects as of August, 1945.

The first view centered on curtailed federal expenditures and increased unemployment; the second on temporary shortages and inflationary price pressures; and the third on high levels of demand, production, and employment sustained over a considerable period.

According to the first view there would be a sharp decline in production and employment from V-J Day to the end of 1945, resulting from a drastic cut in federal expenditures on goods and services and a great reduction in the federal deficit, offset only in small part by a moderate increase in private outlays. These private outlays, particularly for durable goods, would be limited by physical obstacles to reconversion; and the adverse effects of curtailed expenditures on income would be reflected in limited purchases, especially by consumers, of available goods and services. Not much change in prices was expected, on the average, with strong upward pressures on prices of some products regarded as a real problem but one which could and probably would be fairly well handled by continued direct price controls; and with downward pressures expected on the prices of some other products, particularly farm products. Unemployment was expected to rise from 1 million at the end of the war to 8 million in the spring of 1946, reflecting in equal parts a reduction in civilian employment and an increase in the civilian labor force as veterans returned to the labor force more rapidly than wartime entrants withdrew.

For the latter part of 1946 some rise in production and employment and some decline in unemployment was visualized in certain of these forecasts. Federal expenditures would be stabilized then and private

outlays would be increasing as output of producer and consumer durables expanded, providing incomes to support a higher level of outlays for nondurable goods and services.

The second view centered on temporary shortages and inflationary price pressures. Buying by producers and consumers in this country was expected to be heavy, reflecting short supplies of many civilian goods in the hands of consumers, distributors, and producers, unusually strong financial positions, and general willingness to make free use of available resources (including current incomes, accumulated savings, or credit) for the purchase of currently produced goods and services and also of existing properties. This strong domestic demand, supplemented by strong export demand, was expected to make maintenance of price and wage controls extremely difficult and to lead to further inflationary price advances in areas not under control; e.g., farm and urban real estate. Demobilization and liquidation of the war program were expected to lead to some increase in unemployment at the outset but the transition to peacetime activities was noted as already well under way before V-J Day and unemployment was not expected to reach large proportions.

After a fairly short period, perhaps by the middle of 1946, supplies in a growing number of lines would become excessive, at least in one variant of this view. Prices, if not meanwhile effectively controlled, would be at levels far out of line with what could be sustained. Breaks in numerous markets set off by "favorable" crop news, concern about accumulating inventories, growing consumer resistance to high prices, or several such developments, would be followed by fairly general declines in production and employment, starting in industries producing goods like textiles, deferred demands for which could be met most quickly and prices for which would probably be particularly out of line.

The third view centered on sustained high levels of demand, production, and employment. In this view the existence of a large volume of liquid assets and the disposition to spend them freely would contribute greatly to sustained activity. Developments would not be of such an inflationary nature as to lead to a period of reaction in the near future. The shift in output and employment from wartime to peacetime requirements was expected to lead to only temporary and local unemployment; and activity generally was expected to be sustained at a high level for several years until deferred demands had been met.

The Three Views and the Record. As every man knows, there were not 8 million unemployed in the first quarter of 1946; there were less than 3 million, not counting as unemployed the million or more persons "on vacation." Consumption expenditures rose sharply and business buying was in large volume. There were substantial increases in many

prices even before the lapse of controls at the beginning of July. Clearly the second view of prospects of the year immediately ahead, as of August, 1945, was more nearly right than the other views. It remains to be seen whether the general reaction expected in this view to follow inflationary developments will occur and if so, when. Reactions have appeared already, at different times, in prices of securities and of some important commodities. For the most part, however, declines in prices of particular commodities have been rather moderate, have come later than some forecasters expected, and have not as yet spread widely through the economy. Prices generally are close to peak levels and so are consumption, production, and employment; this does not necessarily mean, however, that they are in balance.

Perhaps on this record the second and third views and the methods by which they were arrived at should be examined in detail to find clues for future forecasting. Or attention might be focused on the first view, which was set forth in a form much more convenient for historians and critics and so much more convincing at the time that it formed the basis for many policy recommendations by the executive branch of the federal government. But your reviewer has chosen to come at the problem another way, inquiring about methods in general and using the transition experience only as it bears in a major way on broad issues.

Forecasting Methods and the Transition Experience—Analogy, Formula, and Analysis. Professor Day classified all forecasting methods under three headings—analogy, formula, and analysis—and emphasized the need for analysis—analysis on a very broad basis. Events of the transition period provide some additional evidence on the general problem of methodology thus phrased.

The obvious analogy was with the 1919-20 experience in this country, and study of developments in that period contributed greatly to the view that shortages would be acute and inflationary price pressures general. Differences in the nature of the two wars, in control measures adopted, and in many other matters were evident at the outset, however, and analogy without analysis was generally regarded as inadequate. Forecasters emphasizing the significance of reductions in federal expenditures were quick to point to the limitations of the analogy with 1919-20 and probably underestimated what was to be learned from experience in a period in which similar forces were in operation and could be studied as they affected each other in a particular situation.

The gross national product "models" developed for the transition were based to some extent on formulae drawn from the experience of the prewar years, but account was taken of many transition conditions regarded as unusual. Thus, expenditures on durable goods by consumers were estimated largely on the basis of judgments concerning

the availability of materials and supplies, and concerning productive capacities in this period, and were not taken as a function of disposable income. Great reliance, however, was placed on formulae relating consumer expenditures for nondurable goods to disposable income, with an upward adjustment of only 2 billion dollars in the seasonally adjusted annual rate for the first quarter of 1946 to take account of forces tending to bring about high consumption. The resulting estimate for consumer expenditures on nondurables, 58 billion dollars, proved too low by 17 or 14 billion dollars, depending on whether the comparison is with expenditures actually made in terms of current dollars or of constant dollars. It was assumed in using the formulae that consumers would not materially reduce their net savings rate to purchase nondurable goods and services even though they had exceptionally large accumulated savings, chiefly in the form of liquid assets. This proved to be an unwarranted assumption. It was also assumed implicitly, and incorrectly, that there was some breakdown of total estimated expenditures on nondurable goods among various types of nondurable goods which would correspond with the facts.

The suggestion has been made that an even more general approach relating total consumption to disposable income would have yielded better results than separate treatment of major classes of consumption expenditures. Whatever the merits of particular formulae suggested—and it is difficult to see how such formulae could be made descriptive of the diverse prewar, war, early transition, and later transition periods—it is evident that choice was involved in the selection of formulae as well as in the direct estimating of figures and that the formulae actually most used were quite unreliable for this period.

Forecasts of most other expenditures in the first quarter of 1946, used in the gross product "model" calculations but arrived at by less formal means, were somewhat better than the estimate for consumer expenditures on nondurables. The figure for federal outlays, at an annual rate of 41 billion as compared with actual outlays at a 33 billion rate, was considerably too high, however, while that for state and local outlays was very close. The estimate of private outlays for construction was too low by about 2 billion dollars out of 5 billion and the estimates for producers' equipment, inventory accumulation, and net exports were somewhat too low. Thus, the forecasting record on government outlays and private capital formation was mixed for this quarter, as it had been in different fashion for the fourth quarter of 1945, and it would certainly be incorrect to infer that the art of forecasting capital formation had been mastered. Because supplies were very limited, estimates in the field of capital formation in this period did not require estimates of demand such as will be crucial in later periods. The same holds for outlays on consumer durables, which were forecast closely.

Altogether the experience of the transition period with expenditure forecasts and forecasts generally indicates that a great deal of analysis is essential, even with respect to consumer outlays, and that in the field of analysis much still needs to be learned.

Problems of Analysis. The problems of analysis are legion but several important issues may be selected on which the transition experience offers some evidence. The first relates to the use of condition statements for the economy along with income statements. As of August, 1945, business and consumer inventories of civilian goods, both in this country and elsewhere, were very much depleted. At the same time domestic business and individual savings, largely in the form of liquid assets, had reached exceptionally high levels, and foreign holdings of gold and of dollar exchange were large. Unfilled orders for civilian goods were large and prices were being held down only by direct action in addition to wartime tax measures. Such unusual elements in the situation at the beginning of the period were generally considered but their effects in tightening markets were not emphasized enough, especially in "model" calculations.

The second question concerns the significance of transactions other than those relating to goods and services currently produced; i.e., transactions in real estate, securities, and the like. It is evident that advances in real estate prices, which were not subject to control, were a disturbing element in the price structure after V-J Day, contributing to upward pressures on prices of building materials and to the apparent financial well-being of property owners generally. That this would be so was recognized quite generally, but was emphasized most by students giving special attention to markets and prices.

A third question concerns the importance of orders as distinguished from expenditures. The placing of heavy new orders for all types of civilian goods in the autumn of 1945 provided early evidence of strong demand and widespread inflationary pressures, for nondurable as well as durable goods. The inflationary pressures were greater than would be indicated by expenditure figures partly because of the duplication of orders and the concentration of orders in time. Information on orders, incidentally, is often difficult to obtain and to interpret but is of very great importance in any comprehensive study of prospects.

A closely related fourth question concerns the interpretation of expenditure and order figures in relation to underlying demand conditions. During the transition when price controls prevented shortages from being fully reflected in higher prices, expenditures for particular goods and services were held down. To some extent demands were shifted to other goods or services, and at the same time savings were greatly encouraged. Thus actual expenditures at existing income and price levels did not reflect demand conditions in the same fashion as they

would under other circumstances. This was true of business as well as consumer expenditures and of foreign as well as domestic outlays. In connection with rental housing it is still applicable. The point is mentioned partly in warning against the use of transition expenditure experience in any casual way for future analysis. But the broader inference is that expenditure figures always reflect supply and price conditions as well as the demand situation and that differences in such conditions should be taken into account in interpreting expenditure figures.

The fifth subject for reflection is the significance of the distinction often made between "autonomous" and other expenditures. The distinction has always been open to challenge on the ground that many outlays classed as autonomous, e.g., outlays for producers goods and inventories, are themselves dependent on conditions elsewhere in the economy and that outlays classed as derived, including many consumption outlays, are themselves subject to important special influences other than the level of disposable income. Events of the transition period have shown in exaggerated form the dangers always inherent in forecasting based on this distinction. Forecasts of the autonomous outlays in the aggregate were not far out of line for the first quarter but they were translated into poor forecasts of the "derived" outlays. The suggestion that formulae should be developed to derive estimates for private expenditures on capital formation, usually regarded as autonomous, has the merit of recognizing the partially dependent nature of these variables. Critical readers, however, will still want to know the sources of the forecasts of the independent variables used in the equations from which expenditures usually regarded as autonomous are to be derived; and presumably they will be aware that the sources are not of the sort that astronomers have at their command in forecasting eclipses. There will be no assurance, moreover, that in any particular period the expenditure-receipts approach is the best one.

This introduces the sixth point, which has to do with methods in relation to the times and to the purposes of forecasters. Data and forecasts for expenditures are especially useful for comparing government activities and private activities of various types with each other, and this is one reason why forecasts have been derived from expenditure-receipts tables. In some periods, such as the transition period, however, forecasts of price changes, by type of product, are of very great importance. For price analysis, some approach different from the expenditures approach appears desirable. Thorough study of various markets and of various markets in relation to each other—cash and futures markets, markets for materials and products, domestic and foreign markets—may yield important clues to future developments. Study of the inventory situation in terms much broader than the net change in business

inventories shown in the expenditure tables can contribute greatly to both price and expenditure analysis, especially if better information can be developed on a physical basis. Net change in inventories needs to be broken down into its component pluses and minuses and related to particular commodity situations. The levels of inventories as well as current changes are of great significance. Inventories held by farmers and by consumers need to be added to the story and, in a broader view, stocks of capital equipment need to be considered. So also the whole investment situation. Thus a really comprehensive approach to the forecasting problem in any period seems to call for much more than a statement of possible expenditures and receipts. There is no necessary conflict here, except as the forecaster's time may be limited. One short cut frequently taken by those using the expenditure-receipts approach has been to use constant prices in their calculations. Thus at an early stage the possible cumulative effects of price changes have been ruled out of the calculations. The dangers in assuming constant prices have been emphasized since last spring by widespread changes in prices and price relationships and by their effects on the policies of both sellers and buyers; e.g., in encouraging sellers to withhold livestock and other products from the market last autumn. At the same time in a more comprehensive approach the analysis would include much more material on inventories, production, and consumption in physical terms; and it is to be hoped that later reports of the President on the Economic Budget will include more such information than the report just issued.

Whether or not analysis is put on a really comprehensive basis, one basic question of method, the seventh on this list, is how much attention should be given to analysis of the facts and figures available and how much to the manipulation thereof. In the transition period data have been subject to special limitations and in numerous instances forecasters have found it essential to make their own allowances for biases and discrepancies of one sort or another. But such problems are present to a lesser degree in other periods and always there are important gaps in information. There is special need for more physical volume data on production, productivity, inventories, and consumption. Census and other bench-mark data as well as current series are needed. Meanwhile, forecasters have not yet fully utilized data available; there is opportunity, for example, for more detailed study by parts of totals sometimes arrived at in casual fashion. And there is much information of a nonstatistical nature which may contribute greatly to understanding of the latest developments and of the more intangible elements in the situation. Data will never be available on the spirit of adventure but that does not mean that forecasters can safely forget about it.

Presentation of Results. This concludes the discussion of method and not much will be said about presentation of results. It is evident that

the little words "up" and "down," as applied to the general situation, are of primary importance—but that they are not enough. For many purposes of policy determination it is essential to have ideas on quite a variety of subjects—prices, wages, profits, monetary and credit conditions, production, consumption, employment, and unemployment. A statement of conditions at the opening of the period seems desirable as background for any statement on developments during the period under review. The gross product expenditure-receipts tables no doubt will constitute one part of any comprehensive forecast, although even figures for the past may be fairly indeterminate in some instances and figures for the future may be arrived at by methods quite different, in some respects, from those heretofore ordinarily employed.

Working Conditions and the Future of Forecasting. Finally, a word may be in order concerning the conditions under which forecasters can do their best work. The discussion here has proceeded on the general assumption that forecasters are free to think as they please about prospects, unhampered by obligations to accept this or that set of data or doctrines. Freedom and the co-ordination required in organized research, however, are not always easy to achieve simultaneously. Even such a laudable objective as avoiding conflicting statements by different agencies of the federal government can lead to acceptance and use of assumptions regarded by some as wide of the mark. The official forecast of transition demobilization furnished by the military authorities, for example, was much too small. True, some forecasts would have been farther out of line if better estimates of demobilization had been used; but that is irrelevant here. Perhaps one conclusion is that forecasters should be expected to exercise their own judgment on every major point. At the same time the importance of forecasting should not be exaggerated in such a way that forecasters will be accused of causing recessions or be wary of forecasting recessions for fear of such accusations. Perhaps another conclusion is that with forecasting methods as inadequate as they are and with the status of forecasters yet to be thoroughly established, experimental forecasting work should go forward in several different types of agencies, private and public. Major points at issue, moreover, appear to be such that individuals without large staffs at their command may make leading contributions.

On the record of the transition period, it appears that those who have participated in forecasting during the recent past will be as eager as anyone else to learn more about the art of forecasting. The task of forecasting developments in the period just ahead provides the next opportunity for the exercise of all the ingenuity which forecasters may have developed over recent decades in the use of analogies, formulae, and, above all, analysis—analysis at once broad enough to cover all major elements in the situation and detailed enough on critical points to be illuminating.

ECONOMIC STRUCTURE, PATH, POLICY, AND PREDICTION

By JACOB MARSCHAK

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I. Policy and Prediction

1. Knowledge is called useful if it helps to choose the *best policy* (action).

2. Best policy depends on (a) the things which one values as goals (e.g., for a firm, profit; for a government, national income, or budget surplus, etc.); (b) noncontrolled conditions (e.g., for a firm, weather and government policy; for a government, weather). The best policy is an action that maximizes *a*, given *b*.

3. To choose the best policy, it is necessary to predict (a) the effect of alternative policies under any given noncontrolled conditions; (b) the future noncontrolled conditions.

4. Thus, all useful knowledge implies prediction; and knowledge useless at one time may become useful later when new goals and conditions present themselves.

5. In human affairs (but also in large parts of technology), to predict is, in general, to estimate, for given conditions and for a given probability level, a probable range of the results of a given policy. This range is wide if the observations are few or subject to large errors, or if structural relations (see II) are subject to large random disturbances.

II. Stochastic Economic Structure and Path

6. The probabilistic character of economic prediction is due to the chance ("stochastic") character of economic *structural relations*.

7. Each of the structural relations describes either (a) human behavior (of a specified group of people), e.g., consumers' demand depends on their current and past income, assets, prices and on a "random disturbance," the latter being the aggregate effect of numerous, separately insignificant factors; or (b) technology, e.g., crops depend on acreage, labor, fertilizers, humidity, and a random disturbance; or (c) legal rules, e.g., price ceilings, tax laws, bank reserve regulations. Economic structure is fully described by these relations provided the character of the random disturbances (their variances, covariances) is given.

8. The number of structural relations must equal the number of economic (or nonautonomous) variables. In addition, structural relations contain noneconomic (or autonomous) variables. At any time, the

probable range of values which an economic variable can take depends on the following conditions: (a) the economic structure; (b) the values of noneconomic variables.

9. Conditions can be noncontrolled (see 2 and 3 above) or controlled. Policies and controlled conditions are identical. Thus a policy fixes either some of the structural relations, or some of the noneconomic variables. However, certain government actions may lie outside of government control. For example, certain parts of the budget (interest on national debt) are determined by past values of certain variables; and tax rates may reflect political shifts which, in turn, are partly determined by economic conditions at or before election time. Such nonautonomous government actions will not be classified as policies; and relations stating what determines such actions may have to be included among structural relations (possibly using information gathered by political scientists). On the other hand, government policy may consist in deliberately invalidating such relations of the past and in fixing autonomously variables that were previously governed by structure.

The deliberate introduction of "automatisms" into the economic structure is a particular kind of policy; for example, adopting the legal rule that a change of level of employment or prices by given amounts should be followed by a certain change (stated in advance) in tax rates or public expenditures, with the object of stabilizing employment or prices; or the Bank of England's old rule to raise discount rate when gold flows out.

10. The path which an economic variable follows through time depends therefore on (a) economic structure and (b) on noneconomic variables.

Depending on the character of random disturbances the probable range of deviations from the most probable path will be larger or smaller; the most probable path may show *oscillations* if some of the structural relations are dynamic, e.g., if they contain time-lags or rates of change or acceleration—as in the case of "cobwebs."

III. *The Need for Structural Estimation*

11. Predictions for a future period, based on observations during a past period, are of different kinds according to whether both or one or none of the types of conditions 8 *a, b* changes within and between the two periods.

12. In particular, if structure is known to remain in the future what it was in the past, and if the noneconomic variables have constant values through both periods, the path of each variable would be predictable from the past, apart from random disturbances. In the pres-

ence of random disturbances, the problem is analogous to that of weather prediction.

13. If structure is known to be retained but the noneconomic variables have assumed and are going to assume changing though known values, it is possible to estimate for each current economic variable its dependence ("regression") on all noneconomic ones and on the past ("lagged") economic ones, and to apply this relation to the future. One can thus estimate the effect of policies that consist in controlling certain variables (tax rates, bank reserve ratios).

14. Finally, if structure is known to change in a given way, the prediction of the effect of this change requires the estimation of the original structure. In this case the study of past relations 7 *a*, *b*, *c*, is necessary.

15. Case 14 applies also with regard to the particular policy of introducing "automatisms" (see 9 above) of the most effective kind. For example, to fix in advance the best possible schedule relating tax rates to the unemployment and prices of the previous month, it is necessary to know the lags and elasticities in the consumption equation and in other structural relations at a time when no such legal schedules were in operation. Only when such new device has operated long enough can structural estimation be replaced by the more "mechanical" type of predictions described in 12 and 13.

IV. *Economic Theory, Statistics, and Mathematics*

16. The statistical estimation of the structural relations 7 *a*, *b*, *c* is the "filling of empty boxes of economic theory." The theory is a set of hypotheses. Most of these hypotheses state which variables enter which structural equations, or state certain inequalities (e.g., regarding the signs or relative sizes of certain elasticities). They are based, essentially, on experience independent of the material which is to be used in estimation. This experience includes statements on rational (i.e., utility-maximizing) behavior and on deviations from it, on a plausible psychology of anticipations, on technological data, etc.

17. Economic theory is useful in the case 14 and useless in the cases 12 and 13. It can be presumed, however, that cases 12 and 13 seldom occur in practice. In particular, any policy that changes one or more of the structural relations of the past, gives rise to case 14, and necessitates structural estimation for prediction purposes. Structural estimation may seem useless until a structural change is expected or intended: it comes in very useful then. Thus practice requires theory.

18. All the foregoing statements are concerned with the logic of economic knowledge and its uses. This logic is the same whether or not mathematical symbols are used. However, mathematical presentation is of great help in testing the internal consistency of a theory (see 8 on

the number of relations and variables); and it is hardly avoidable when the appropriate estimation methods are to be chosen and applied.

19. After stating the hypotheses about the structure, one may find that a certain collection of data will permit prediction only in the form of such a wide range of values as to make it useless for policy choice (since a wide range of policies will appear to yield equally good results). For this, mathematics cannot be blamed; it will merely reveal what otherwise might remain concealed. Mathematics does not suppress any information available for other methods; and it makes clearer when and how additional information must be used (e.g., extending time series, supplementing them by cross-section data including attitude surveys, etc.).

DISCUSSION

ARTHUR SMITHIES: For policy purposes, it is necessary to distinguish between the best estimate in the probability sense and the best strategic assumption. Although the most probable forecast may be subject to a wide margin of error, it is frequently necessary to select a single figure as a basis for policy.

In preparing the President's budget, for example, instructions are sent out to the departments in June before the beginning of the fiscal year in question. These instructions include the economic assumptions on which the agency expenditure estimates are to be based. We know that we cannot forecast accurately for a period on the average eighteen months distant, but it is not feasible administratively to ask the departments to give a range for their estimates. Most of them have no explicit knowledge of the theory of probabilities. We must, therefore, use the best strategic assumption.

The strategic assumption should differ from the most probable estimate for two main reasons.

If policies are based on, say, an assumed national income, it is not a matter of indifference whether the estimate turns out to be too high or too low. It is much better to have a program of unemployment relief and not use it than to need it and not have it. But if national income is assumed at a low level, there is danger that policies may be adopted which will be inflationary if national income, for other reasons, turns out to be high. The risk of inflation must be weighed against the risk of failure to provide for unemployment. The strategic assumption should be selected so as to minimize the risks of being wrong.

It is frequently much easier to change policy in one direction than in another. It is easy to reduce taxes but hard to increase them. It is easy to remove economic controls, but hard to impose them. On the other hand, it is risky to keep taxes too high or to retain controls too long. But the strategic assumption should be based in part on the ease or difficulty with which policies based on it can be changed.

Economists delude themselves and the country when they assert that policy should be flexible enough to provide for a wide range of contingencies. The machinery of government of the United States is so complex that there are severe limits to flexibility. I do not see how we can hope to devise methods to guard against inflation and deflation at the same time. Even though both may be equally probable, the strategic assumption should give greater weight to the alternative that is considered to be the more dangerous.

If viewed as strategic assumptions, the transition period forecasts made in Washington appear in a more favorable light. Although it was assumed that transitional unemployment was high, it was also assumed that partial inflation and acute shortages would occur in important sectors of the economy. The Washington economists recommended unemployment relief, continued price control, and controls over construction. The trouble was that the assumption was presented as a forecast and the economists got hoist with their own petard.

HERBERT STEIN: One of the most obvious and most important lessons from our experience with forecasting is that we do not do it very well. To point this out is not merely to counsel humility or to suggest that we should stop forecasting. More forecasting will certainly be part of the process by which the ability to forecast is improved. But for the present, at least, prudent policy ought to reckon with our ignorance of the future. The fact of ignorance emphasizes the danger of relying upon compensatory policy to the neglect of structural reforms that might make the economy respond to disturbances in a damping rather than aggravating manner. Among compensatory policies it points to the need to minimize dependence upon long-term forecasting by the development of more flexible instruments. This is likely to be an important consideration in the relative weight given to fiscal versus open-market means of monetary control and to revenue versus expenditure adjustment within the fiscal field.

It is less amazing that the V-J Day forecasts were wrong than that the possibility of gross error was so generally underestimated at the time. Just after his experts completed their V-J Day forecasts but before they had been made public, the Director of War Mobilization and Reconversion appeared before a Senate Committee on the Full Employment bill and asserted his confidence in the ability of experts to provide useful forecasts on which policy could be based. So attached were the forecasters to their predictions that for weeks after V-J Day the widening divergence between the forecasts and the actual statistics of layoffs, retail sales, and employment was considered to throw doubt upon the accuracy of the statistics, not the forecasts. The 8,000,000 forecast of unemployment was published by OWMR after the data began to suggest that the actual courses of post V-J Day events was not running down the forecast path.

A forecast even though it later proves wrong may yet turn out to be the most prudent "strategic assumption" on which to act, as Mr. Smithies suggests. It is doubtful that even by the generous test of the "strategic assumption" the V-J Day forecasts come out very well. Conditions were such that tax cuts once made could not be undone, wage increases could not be reversed, and the restraints on public works, once loosened, could not be restored. The "assumption" of depression gave aid and comfort to all these moves. On the other hand, the assumption of continued general inflationary pressure would not have closed the door to the policies that would have been appropriate if the assumption turned out to be incorrect.

This is all water over the dam. But in his January, 1947, Budget Message the President forecast, presumably on expert advice, that if a recession occurred "it would be a temporary slump growing out of transition period difficulties and would call for no revision in our budget policy." This seems an unnecessary foreclosure of fiscal adjustments that might prove useful if the forecast should prove to be incorrect.

THE SOCIAL AND ECONOMIC SIGNIFICANCE OF ATOMIC ENERGY

THE PROBLEM OF REDUCING VULNERABILITY TO ATOMIC BOMBS

By ANSLEY J. COALE
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Attacks against industrial activity and civilian populations are a commonplace characteristic of modern war; this characteristic is given new and somber emphasis by the superlative efficiency of nuclear fission as an agent of destruction. Until there is substantial evidence that the relations between great powers are no longer chronically unstable, one's attention is forced, with whatever degree of reluctance, to methods of averting or alleviating the potentially disastrous effects of attack by atomic bombs.

An analysis of protective methods cannot be divorced from speculation about the future relations between nations, and about the nature and scale of attack that might occur. Plans for protection must conform to suitable aims of national policy toward atomic weapons, aims suitable to the various circumstances which might arise. The purposes of national policy toward the military use of atomic energy may be one or more of the following: (1) to prevent the occurrence of an attack by atomic weapons; (2) to prepare to win a war involving atomic weapons, should one occur; and (3) to minimize the loss of civilian life during attack, and to maximize the nation's ability to resume activity after it.

The comparative importance of these goals will depend in part on the probability of securing them. The first aim will almost always be the most important, and the others should almost always be subordinated to it. But as the likelihood of success in avoiding atomic attack vanishes, the importance of the other aims becomes more apparent.

Protective measures designed to help achieve these goals would differ according to the state of military technology, and also according to the conditions of international relationships. It would be fruitless to try to anticipate every conceivable variation of international situation. There is, however, one significant variable which in itself will have a profound effect on the future role of atomic weapons. This variable is the success or failure of the United Nations in establishing an agreement prohibiting production of atomic energy for military use.

The extreme situations would be, on the one hand, an agreement successfully prohibiting atomic weapons, and on the other, no limitation on atomic armament. The anticipated character of war, the military plans for it, and the measures which might be designed to reduce vulnerability would be quite different in these divergent circumstances.

It cannot be claimed that these polar alternatives exhaust the possibilities. It is entirely possible that the United Nations will propose an *ineffective* agreement: one that pretends to guarantee against the manufacture of atomic weapons but that in fact fails to do so.

In this paper, only the extreme conditions of a successful agreement and of no agreement at all are considered. These are analytically the most simple, though perhaps not in practice the most probable, situations. An analysis of vulnerability problems under an ineffective agreement would not be profitable until the defects of an actual treaty are available for study.

The pages that follow are devoted to a discussion of vulnerability reduction as a means of avoiding atomic attack, of winning an atomic war, and of reducing civil death and destruction. The discussion is divided into two sections, one treating problems of protection under an assumption of effective international agreement, and the other treating these problems when unlimited atomic armament is assumed.

I. Vulnerability Reduction Under an International Agreement Prohibiting the Manufacture of Atomic Weapons

The United Nations Commission on Atomic Energy is presently endeavoring to draft a plan for the international control of atomic weapons. It is assumed in the next few paragraphs that the Commission's efforts will be successful. The most brilliantly designed and executed plan for preventing the manufacture of atomic bombs would not destroy the knowledge that a superlative explosive can now be made, and would not forever banish the possibility that it might again be used. The sole guarantee which would make *certain* that atomic weapons will not be employed is a guarantee that large-scale war is impossible. It is not the intention here to imply that a guarantee against war will never be achieved, nor to imply that an atomic agreement would not be an important step toward such a guarantee. It is assumed merely that proposals of the nature of those under consideration by the United Nations Commission would not in themselves remove all possibilities of war, and therefore would not entirely destroy the possibility of atomic attack.

Thus, if an agreement should be reached on limitation of atomic weapons, the problem of vulnerability would still exist.

Vulnerability Reduction as an Aid to the Prevention of Attack. The

protection of essential sources of military strength—sources which are liable to destruction by a small-scale atomic bombardment—would be a contribution toward preventing attack if effective international limitation is achieved. The existence of concentrated targets of great strategic importance, such as the national capital of this country, offers an excessive advantage for abrogation of an atomic agreement.

Measures which reduced the vulnerability of such important targets would thus be a useful adjunct to the agreement itself in reducing the probability of atomic aggression. In order not to jeopardize the continuation of the agreement, vulnerability reduction should be restricted to measures which could be freely recommended to all subscribing powers.

Vulnerability Reduction as an Aid to Winning an Atomic War, Should One Occur. The international authority established to supervise the restriction of atomic weapons can hardly survive unimpaired if a war between major powers begins. The termination of its effective control would probably be nearly coincident with the start of hostilities.

The prior existence of an effective agreement would not prevent the use of atomic weapons in warfare. Rather, the agreement would eliminate the possibility of a large-scale atomic attack and counter-attack in the opening days of the war.

There would thus be two phases in a postagreement war: a first period of uncertain duration during which atomic bombs would be unavailable for large-scale use, and a second when atomic weapons might be employed on a large and perhaps ever rising scale.

It would be a function of the military organization to plan and prepare to win any war which might follow the termination of an atomic agreement. Military plans must take account of the probable nature of future warfare, and cannot be based on an assumption that controls which are presently successful will continue to be so. It might seem reasonable to try, during peacetime, to attain a military machine strong enough to make victory sure. It would seem good military judgment to maintain in readiness non-atomic combat forces of maximum strength, and to make every possible preparation for atomic bomb production short of actual illicit manufacture. But however sensible these preparations might seem from the point of view of guaranteeing victory, they are not measures which would be viewed with equanimity were they initiated by rival powers. Such preparations would therefore be foreign to the philosophy of an agreement limiting weapon manufacture, and it is probable that they could be undertaken only at the risk of losing continued international renunciation of atomic weapons.

However, the restrictions on preparation would not prevent whatever preparations *are* tolerable from anticipating the expected charac-

ter of warfare, nor would restrictions preclude the evolution of full military plans for the course to be followed should the agreement fail. A major factor in both preparations and plans would be the protection of potential military strength from destruction.

The basic principle of vulnerability reduction in the purely military sense would be to see that no major source of strength is exposed to severe damage. There are at least three elements deserving protection in accordance with this principle: (1) the active combat forces and their equipment must be protected from destruction; (2) the capacity of the nation for unified action must be preserved; and (3) the production and delivery of materials for war must be insured.

The necessity to protect combat forces would require that all military equipment and personnel not directly engaging the opponent (airfields, naval bases, arsenals, forces in training, and the like) be so dispersed and protected by structure (underground, if need be) that an attack of the strength to be reasonably anticipated would not imperil the efficiency of military action.

Preservation of unified action would call for a continuation of effective national administration and of internal communications. Excessive deterioration of morale under attack would need to be avoided. Administration might be interrupted with serious consequences because a single attack upon Washington might be able to destroy the organization needed to direct the nation at war. Designation of successors for members of the government who might be killed, relocation of various agencies, duplication of files and other equipment—these are some of the measures which might alleviate the effects of an attack on the capital. A small number of atomic bombs might hamper the cohesive performance of a nation at war by interrupting the flow of intelligence ordinarily carried by telephone and telegraph. Atomic attack against a few large cities might cause "aimless, even hysterical activity, or flight"¹ in the target cities and in potential target areas. The need for continued administration and communications and for sustained morale indicates the necessity for research to discover whether in fact safeguards would be required, and to ascertain what measures would promise an important degree of safety.

An element vital to victory in modern war is the provision of munitions and supplies to the active combat forces. It is conceivable that the production and transport of these materials could precede the war; i.e., that a war could be prosecuted to a large degree from munitions and supplies accumulated in peacetime. However, the restraining effect of an agreement, together with public reluctance to support military

¹ *The Effects of the Atomic Bombings of Hiroshima and Nagasaki* (U. S. Strategic Bombing Survey: Chairman's Office, June 19, 1946), p. 23.

expenditure during peacetime, would limit the accumulation of weapons before war begins. The possibility of a conflict of extended duration, the need for the wartime birth and growth of atomic bomb manufacture, and other expected changes during the war in military technique—these reduce further the possibility of conducting a war solely from accumulated munitions. It seems an unavoidable conclusion that, in a postagreement war, a large proportion of the total munitions needs must be produced after the war begins.

It was stated earlier that the general principle of vulnerability reduction in the military sense is to make sure that no major source of strength is exposed to severe damage. This principle, as applied to industrial production, implies that no attack by hostile forces shall be able to prevent the completion of essential munitions and supplies; or, in other words, production needed for the conduct of the war should continue despite attack.

There are two preliminary sets of data needed in an analysis of protective plans for the production of war materials. The first is a description of the industrial products which would be essential to the war, and the second a description of the industrial structure required to manufacture and transport these products.

It would be nearly impossible to obtain in detail the first of these sets of data, inasmuch as one cannot foresee with precision the munitions to be used in a war in the indefinite future. However, the second set—a description of the structure of the needed war industry—depends in part on a knowledge (not in principle inaccessible) of the peacetime structure of industry.

A substantial contribution toward the analysis of industrial vulnerability could be made by maintaining a continuous and complete survey of the current industrial structure. The purpose of such a survey would be to show how *any* arbitrary group of war goods might be produced, and to find out how vulnerable to attack the production of these goods would be. This survey might consist of a series of studies of individual industrial processes, studies which would make clear both the internal characteristics of each process and its relationship to others. A single process—the production of one category of material, or of a related group of materials—might be analyzed by collecting the following information:

1. *Productive facilities for the process, and relations to other industrial production.* The present operating and idle capacity for the process should be ascertained, and the facilities convertible to the process determined. The materials and the construction time required to erect new capacity should be discovered. The uses of the products of the process in other processes and in various finished goods should be

listed, as should the input materials required. Possible substitutes for the product in various uses should be recorded.

2. *The vulnerability of the process to atomic attack.* Vulnerability depends on the nature of the process itself (i.e., on the frangibility of the plants by heat and blast, on the difficulty of repair after damage, and on the protection offered workers against the antipersonnel properties of the atomic bomb); on the location of the plants which carry on the process (the process is vulnerable if a substantial proportion is conducted in a small number of plants, or in plants found in a few clusters, each of small radius compared to the destructive radius of atomic bombs; interior locations are presumably less vulnerable than those near a border); on the accessibility of supplies (a process is vulnerable if atomic bombardment can easily cut off needed materials); on the location of the workers employed (a process is vulnerable if its labor has special skills and resides in compact areas); and on the requirements for industrial energy (a process safe by the preceding criteria would be vulnerable if a large proportion of its plants required energy provided solely, for example, by the Columbia River dams).

3. *The suitability of various remedial measures for reducing vulnerability.* If a process is vulnerable to atomic attack, its vulnerability might be reduced by establishing a safe locational pattern, by accumulating stocks of materials at the point of intended consumption, or by providing physical protection against the destructive properties of atomic bombs. Location in a safe pattern would be easier for those industries whose capacity must be greatly enlarged in wartime; for safe location could then be part of the plans for expansion. A non-vulnerable pattern would be especially difficult to achieve where economies of scale or other special advantages of concentration are present.

The acquisition and retention (at the point of intended consumption) of stock piles of materials required in a war economy would allow that economy to continue uninterrupted while damaged sources of supply are restored to operation. Stock piling would probably be less expensive and politically more feasible than relocation for many processes. It would be best applicable to products easily stored and not subject to rapid obsolescence or spoilage.

Physical protection would involve construction of buildings which are blast and heat resistant, and which afford shielding against penetrating radiation. Advantage could be taken of irregularities in terrain. The most essential facilities might be constructed underground.

A survey which supplied this information, maintained complete and up to date, would provide a background for planning the safe production of whatever materials the latest military plans would require. In other words, when the best information available about the expected

severity of attack and about the requirements for production after war begins is added to the data collected by this survey, there would be a sound basis for planning the safest possible configuration of war industry.

The production and delivery of war materials might be interrupted by attacks on transportation facilities. The fact that an efficient atomic bomb must be of at least critical size implies that only major industrial targets or important transportation bottlenecks would be subject to attack so long as there are only a small number of bombs. A bomb exploded under the Hudson River might fracture the tunnels under the river and shower the docks and railroad yards adjacent to the river with radioactive spray. The devastation of a large city might restrain all traffic into the city except that required for relief.

The plans for industrial location and for stock piling should aim at independence of transport from major cities and important bottlenecks (ports, canals, and the like). A comprehensive study of the time required to restore damaged transport facilities, of alternative routes should key centers be destroyed, and of various remedial measures is needed.

Vulnerability Reduction as a Means of Minimizing Loss of Life. The characteristic of the atomic bomb that rightfully arouses the most concern is its ability to kill. It produces (even in its demonstrated forms) many more casualties than would an attack with high explosives and incendiaries which caused an equivalent amount of damage.²

The danger to civilian safety follows from the existence of extensive areas of high population density, areas which offer very insufficient shelter from the deadly properties of the explosion. There are many places in the United States where the terrible disaster at Hiroshima could be duplicated. An additional source of danger is the vulnerability of the establishments which would be called upon to provide relief for bombed cities: hospitals, fire-fighting organizations, and the like. Still further calamity is threatened by the potential destruction of houses, food stores, medical supplies, water supplies, utilities, and other necessities for continued life in the stricken areas, and by the possible destruction or impairment of factories, tools, and personnel which would be needed for restoration and to provide essential materials after attack had ended.

Death and injury might be lessened by reducing the density of

²"If one produced the same amount of damage in two comparable cities, in one by incendiary bombing, and in the other by atomic bombing, there would be fifteen times as many people injured in the second as in the first. There would be eighteen times as many killed." Testimony of D. A. Terry, of the medical division of the Strategic Bombing Survey. Hearings before the Special Committee on Atomic Energy, U. S. Senate, pursuant to S. Res. 179. Part 5, February 15, 1946, p. 518.

population in large urban areas by any feasible method, by building deep shelters of sufficient size to house a large proportion of urban populations, by planning emergency medical care and other disaster relief, and by encouraging the construction of blast-, heat-, and radiation-resistant buildings. The permanent reduction of density in urban centers would involve unprecedented government intervention if done rapidly and on a large scale. Some improvement could be achieved by careful planning of slum clearance and other government housing projects, and by encouraging dispersion through various forms of subsidy. Perhaps the most feasible method of reducing the concentration of population would be a nonpermanent evacuation of substantial numbers from large cities at the beginning of a postagreement war. The prior existence of a limitation on atomic weapons would provide a brief period for such evacuation—a period during which atomic bombs would not be used in large numbers.

II. *Vulnerability Reduction When Atomic Armament Is Not Limited by International Agreement*

It is assumed in the paragraphs that follow that there is no treaty limitation on atomic armament. It is further assumed that technical limits would allow a rate of production of atomic bombs (of the sort already used) of hundreds per year, and that a major power could accumulate thousands no more than a decade after it had started large-scale production. Finally, it is assumed that the great powers would fully exploit the technical possibilities. What would be the problems of vulnerability after the accumulation in several nations of thousands of atomic bombs?

In a postagreement war, large-scale attacks (for example, with more than ten bombs) would not occur before the passage of some interval after the termination of effective control; and such a war might be ended before more than a hundred or so bombs had been used. In contrast, any war following the multilateral accumulation of thousands of atomic bombs would quite possibly open with reciprocal attacks of terrible magnitude. Under the latter assumptions, then, the reduction of vulnerability must have been completed at the time war starts, and protection must have been provided against a very large-scale attack.

The Prevention of Atomic Attack. It is to be presumed as a corollary of the absence of international limitation that each major nation must rely primarily on its own actions to avoid war and thus to avoid being subjected to atomic bombardment. The method of avoiding war that most naturally suggests itself in these circumstances is to prepare an atomic counterattack of maximum proportions, and furthermore to provide safeguards which would insure that the counterattack could

be delivered after reception of an initial bombardment. More exactly, the measures giving perhaps the best guarantee obtainable against attack would be, in the absence of treaty limitations, synonymous with preparations for victory in an atomic war—"victory" in the formal sense of the imposition of surrender on an opponent. The important motive for preparing to win an atomic war would be to avoid having to prove that the preparations had been successful.

Vulnerability Reduction as an Aid to Winning Any War That Might Occur. The general pattern of preparation imposed by the prospect of an early large-scale exchange of holocaust would be to maintain in constant readiness all of the elements needed for effective military action (particularly for a major atomic counterattack); to keep these elements protected from destruction by the most extreme precautions; and to make them as independent as possible of the remainder of the national community, which might become completely disorganized under a major atomic attack. The details of this pattern would involve, for example, full replacement during peacetime of military air conveyances with later models whenever an important improvement is made, and similar re-equipment of the defensive forces following each major innovation in techniques of defense. The stocks of atomic bombs, the carriers for the bombs, and other important components of military force would need to be widely dispersed, and protected by the safest achievable structures (presumably underground).

In the interest of brevity, the protection of only the production of military equipment will be discussed here, as illustrative of the contrast between the reduction of military vulnerability under the present assumption of unlimited armament and under the earlier assumption of atomic agreement.

In view of the probable decisive magnitude of the early attacks, the primary method of protection for the production of military material would be to complete that production in advance of the war. A dispersed and protected stock of products suited to the latest military plans should be maintained—a stock large enough to meet all the anticipated needs for military action.

However, the war may not have been decided before such stocks are exhausted, or the war might start before a sufficient quantity of some decisively novel weapon or implement of war had been accumulated. Therefore, as provision for a war of moderate duration, the factories engaged in the direct production of munitions should be so protected that they can continue under attack. Protection of these plants would call for wide dispersion, for underground construction, for large accumulation of the input materials used in production, and perhaps for protected dormitories adjacent to the factories, stocked with food.

The longer the war, the more likely that accumulated weapons would

prove inadequate, that strategic developments would demand unforeseen munitions, and that industrial production during the war would decide the outcome. It would therefore be desirable to extend extreme methods of protection back through the industrial complex supporting the production of finished munitions. However, it is unlikely that a complete industrial organization from raw materials to finished product could be so designed as to withstand an assault by x , 000 bombs. "Complete" protection should be provided as far back as practicable, with large stock piles of input materials maintained at the earliest protected stage.

Vulnerability Reduction as a Means of Minimizing Loss of Life.

In some ways, the protection of military strength would be no more difficult when armament was unlimited than when an agreement prohibited atomic weapons. The larger scale and earlier incidence of atomic attack would be in part compensated by the economy resulting from our own employment of extremely efficient weapons; furthermore, there would be fewer inhibitions to restrain the establishment of safeguards.

But in seeking methods for minimizing death and destruction, there are no compensations for the probability that attack would be early and massive. It is difficult to outline measures which would reduce deaths below seven or eight figures if x , 000 bombs were delivered on the most densely populated areas of the United States. A drastic program of dispersion of urban populations would decrease the probable number of casualties; but unfortunately, since the estimated cost of an atomic bomb is only one million dollars it would presumably be easier for other powers to add to the strength of their attack than for this country to increase the number of targets by building smaller cities. The degree of decentralization which would be needed in order to make the casualties no greater than, say, those caused by Allied bombing of Germany is probably a greater degree than would be feasible, if indeed *any* conceivable dispersion could make casualties so few.

To say that massive casualties could not be avoided by protective measures is not to say that precautions would be worthless. Every means available should be exploited for inducing a less concentrated pattern of habitation. Large, deep shelters should be constructed underground. Food stocks and other stores should be accumulated in protected places of storage. Structural features resistant to the properties of atomic explosives should be encouraged. However, one should not anticipate that such measures would avert an extremely large number of deaths and injuries in a several-thousand-bomb attack.

The foregoing discussion has attempted to describe one facet of the problems arising from the current revolution in warfare: specifi-

cally, the reduction by protective methods of the potential consequences of atomic attack.

Even in the description of this single aspect, there have been simplifying assumptions, stated explicitly or implied, which have made the analysis easier, but which unfortunately do not in any way reduce the difficulty of the problems themselves. For example, no account has been taken in this discussion of potential improvements in atomic bombs; yet there is convincing published testimony that substantially larger and more efficient bombs may be feasible. Little mention has been made of the possibility of novel methods of employing atomic bombs—methods, for example, that might make use of radioactive products with protracted lethal properties. The question of vulnerability to bacteriological or other organic poisons has been totally omitted. In point of fact, such technical possibilities should have a determining influence on plans for vulnerability reduction.

Similarly, the pragmatic political and economic barriers to the formulation and implementation of protective plans have been almost entirely overlooked, as have been the effects such plans would have on political and economic life.

This discussion has been concerned—in each set of assumptions—with an era which would begin in the near future and might extend for a few years—one or two decades. In the more distant future, it is to be hoped that the present highly concentrated spatial pattern of industrial nations—a most vulnerable arrangement—will be gradually readjusted. But unless in some way there is a limitation imposed on atomic weapons, any readjustment may well be overcome by increases in the number and effectiveness of the atomic bombs in the arsenals of the world.

ECONOMIC ASPECTS OF ATOMIC ENERGY AS A SOURCE OF POWER¹

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The possible use of fissionable substances as a new and important source of energy gives rise to a number of economic questions. This paper deals in a very general way with two sets of questions: those related to the comparative costs of producing energy from atomic fuels and other sources; and those related to the economic consequences which might follow the introduction and use of atomic fuels. The discussion is built around examples which illustrate each of the questions considered.

I. The Comparative Costs of Power from Atomic and Non-atomic Sources

Energy is developed in the atomic pile in the form of heat. The heat produced might possibly be consumed directly in a variety of industrial and nonindustrial uses requiring either low- or high-temperature heat. In the light of what is known of current research on peacetime applications of atomic power, it is probable that the earliest important use of the heat produced in the pile will be in the generation of electricity. It is for this reason that such estimates as have been made of the cost of energy from atomic sources have been for the generation of electric power. This paper, similarly, is limited to a discussion of atomic energy as a source of electric power.

Electricity is at the present time generally produced most cheaply in large hydroelectric developments.² One important factor to notice in connection with water power is that it exists only where natural conditions permit, and that it is not considered economically feasible to transmit the electricity produced beyond a radius of about three hundred miles.³ The cost of electricity based on a fuel such as coal is generally higher than for hydroelectric power, but such fuels are very widely used because they can be transported to the power station, wherever located. The transportation of ordinary fuels is, however, costly; for example, each two hundred miles of coal transportation by rail adds about one mill per kilowatt-hour to the cost of electricity so

¹ The author wishes to express his thanks to Jacob Marschak and Edward Boorstein for their many helpful suggestions which have been incorporated in this paper.

² For data supporting this generalization see Lincoln Gordon, "Power and Fuels" in *Industrial Location and National Resources* (National Resources Planning Board, December, 1942).

³ J. P. Watson, "Potential Waterpower in the United States" in *Energy Resources and National Policy* (National Resources Committee, January, 1939).

that generating costs in a power station located four hundred miles from a coal mine might be greater by about 30 per cent than in a station at the mine mouth, as a result of the cost of coal shipment on railroads.⁴ When we consider that one pound of atomic fuel yields about as much energy as two and a half million pounds of coal it is clear that, by ordinary standards, the cost of transporting atomic fuel will be infinitesimal. As a result nuclear power costs will for similar plants be fairly uniform throughout the world.

What, then, are the costs of producing atomic power? The most authoritative publicly available estimate of costs is that derived by a group working at Oak Ridge under the direction of Dr. C. A. Thomas,⁵ Vice-President of the Monsanto Chemical Company. According to this study a power plant based on atomic fuel could generate electricity at a cost of about eight mills per kilowatt-hour, if operated at 100 per cent of capacity. Because of the nature of their demand, power stations normally operate at no more than about 50 per cent of capacity; we have, therefore, reconstructed the Thomas figure on the basis of operations at 50 per cent of capacity, and have derived an estimated cost of about ten mills per kilowatt-hour.

A lower cost for atomic power was derived by a group working under the direction of Professor Condliffe at the University of California.⁶ They estimated that the same general type of plant as was assumed by the Thomas group might produce electricity for as little as four mills per kilowatt-hour, operating at about 45 per cent of capacity. This compares with a cost of about ten mills in the Thomas report.

Both estimates are surrounded by a wide area of uncertainty because the future cost both of constructing atomic plants and producing fissionable materials can be estimated only within broad limits. Despite the uncertainties, it is possible to isolate one factor which may account for at least part of the difference between them. Thus, the estimate of the Thomas group is for a plant with a capacity of 75,000 kilowatts, while the California estimate is for a plant of 500,000 kilowatts. The California study indicates that a large part of the investment in an atomic power plant would be for special instruments and controls, and that their costs would not vary in the same proportion as size of plant. As a result, the larger plant assumed in the California study might be expected to produce electricity at a substantially lower cost than the smaller plant assumed in the Thomas report.

⁴Based on data in I.C.C. Reports, Vol. 69, p. 18; *Electrical World*, December 2, 1939, "Fourth Steam Station Cost Survey"; and John Bauer and Nathaniel Gold, *The Electric Power Industry* (Harper, 1939).

⁵*Nuclear Power*, Scientific Information Transmitted to the United Nations Atomic Energy Commission by the United States Representative, Vol. IV, September 5, 1946.

⁶"Atomic Energy, Its Future in Power Production," *Chemical Engineering*, October, 1946.

The two estimates may, therefore, be taken to suggest that the cost of generating electricity in atomic power plants may be somewhere between four mills and ten mills per kilowatt-hour, or possibly somewhat beyond this range. Table I summarizes our estimates of electric

TABLE I
ESTIMATED COSTS OF GENERATING ELECTRICITY IN SELECTED REGIONS OF THE WORLD,
1937 AND 1947, COMPARED WITH ESTIMATED COSTS OF ATOMIC POWER

	Average Generating Costs in Mills per Kilowatt-Hour ^a		Cost of Atomic Power in Mills per Kilowatt- Hour
	1937	1947	
Thomas Report			8.0-10.0 ^b
California Report			4.0 ^c
Argentina			
Coastal regions	9.0	16.0	
Inland regions	10.0-11.0	17.0-18.0	
China			
Mining regions	6.5-7.0	—	
Other regions	7.0-9.0	—	
Great Britain	7.25	9.5	
Hungary	9.25	—	
India			
Mining regions	6.5-7.5	—	
Other regions	7.5-10.0	—	
Soviet Union ^d			
Ural region	6.5	—	
United States ^e			
At mines	5.50-6.25	5.75-6.75	
Near mines or on developed waterways	6.50-7.25	7.00-8.25	
Far from mines, accessible by rail	7.50-8.75	8.50-9.50	

* In order to place all electricity costs on a comparable technological base, we do not show data on actual generating costs since these would be influenced by the condition of the plants in operation. Instead we have estimated electric generating costs from the cost of fuel in the various regions, assuming the same relationship between fuel costs and generating costs as would obtain in a modern 100,000 kilowatt plant operating with a 50 per cent load factor. (Based on data in *Electrical World*, December 2, 1939, "Fourth Steam Station Cost Survey," and Bauer and Gold, *op. cit.*) All coal prices include cost at mine and transportation charges. Transport costs from mines to consuming regions estimated from representative railway, river, and ocean freight charges.

^b Assuming 75,000 kilowatt plant. Lower cost based on 100 per cent load factor; higher cost estimated by us for 50 per cent load factor.

^c Assuming 500,000 kilowatt plant and 45 per cent load factor.

^d Data on mining costs could not be found for this region; hence United States mine price was used.

^e Coal plants only. Generating costs estimated on basis of standard relationship described in footnote *a*. Earlier figures relate to 1938 and are based on data on actual fuel costs for plants in operation in that year. Figures for 1947 are preliminary estimates derived by us from general information on current coal prices and freight rates.

generating costs for selected regions in 1937, a prewar normal year, and 1947, in those cases where data are available. The regions have been chosen to represent varying patterns of energy resources occurrence and use.

For every region covered the costs of electricity are within or above

the range of atomic power costs we use. This could be taken to indicate that atomic plants of a size assumed in the California study could produce electricity more cheaply than some of the power stations currently in operation in all countries. However, such stations would probably be so large that few, if any, locations could absorb the electricity produced, considering the feasible limits of transmission. For example, a 500,000 kilowatt plant, which is the size assumed in the California study, produces enough electricity to satisfy an industrialized region of about one million population. As estimated coal-electricity costs approach the upper limit of the range of atomic costs, or go beyond it, this qualification becomes less important, for this can be taken to indicate that even more moderately-sized atomic power plants might produce electricity more cheaply than coal plants.

The highest and lowest level of generating costs in the countries covered in Table I are for Argentina and the United States respectively. This is to be expected since Argentina is an outstanding example of a country poor in energy resources which must import fuel from extremely distant sources of supply, while the United States is an outstanding example of a country with abundant fuel resources. Nevertheless, even in the United States costs approach the upper limit of the range of atomic costs in certain parts of Minnesota, South Dakota, and Wisconsin. Costs throughout Argentina in 1937 were in the neighborhood of the upper end of the range of atomic costs; currently, costs throughout Argentina are considerably beyond the highest estimate of atomic costs, as a result of the world-wide shortage of coal and shipping. If postwar normal electricity generating costs in Argentina are somewhere between costs in 1937 and 1947, the savings which might be possible through the use of atomic energy appear to be considerable.

Other regions with generating costs approaching the upper end of the range of atomic costs and therefore exemplifying places where atomic power may be economically feasible, are Hungary and areas remote from coal mines in India and China. Hungary uses domestically-mined fuel for the generation of electricity and the high costs are explained by the fact that the fuel is poor in quality and costly to mine. In China and India the level of electric generating costs in regions remote from energy resources is relatively high as a result of coal transportation; the highest costs in India are above those in China because mines are more highly localized in India.

The position of Great Britain differs from that of the other regions covered. It has traditionally been an important producer and exporter of coal, and there are few regions in that country remote from sources of energy. This condition was reflected in moderate costs of electricity as shown in Table I for 1937. However, generating costs are con-

siderably higher in 1947 than they were in 1937 as a result of increases in the costs of mining coal between the two years. In part these increases have resulted from temporary dislocations brought on by the war; in part, there has been a long-run tendency towards increasing costs in the British coal industry as a result of an insufficient degree of mechanization and modernization of coal mines to counteract the decline in the grade of coal resources. Whether coal costs will fall in the future, and by how much, will depend on the success the British have in carrying through modernization of their coal industry; if they do not experience a high degree of success, atomic energy may prove to be a cheaper source of electricity than coal.

The Ural region of the Soviet Union typifies still another situation. The cost of generating electricity in this region is estimated at a level about midway between the two estimates of atomic costs, which suggests that the use of atomic power may be of questionable economic benefit. The relatively low level of costs results from the current use of locally mined coal and lignite for electric power generation.⁷ There is evidence, however, that any substantial expansion of electrification in this region would require that coal be sent from other parts of the Soviet Union. We estimate that such additional amounts of electricity would cost between nine and nine and a half mills per kilowatt-hour—a level not far below the upper end of the range of atomic costs. Atomic energy might provide the additional power at a lower cost.

Before concluding the analysis of the comparative costs of power from atomic and non-atomic sources, two additional factors which might favor the position of atomic power should be considered. The estimates of atomic power costs are for a technology on the threshold of development. Great declines in cost may be possible in the future as a result of advances in techniques of constructing and operating piles, and of producing fissionable materials. Electricity based on coal represents an established technology which probably will not undergo radical change to nearly the same extent.

The second factor to consider is that for such countries as China, India, Great Britain, and the Soviet Union, the saving involved in introducing atomic energy cannot be assessed merely by comparing the current level of costs of producing power from atomic and non-atomic sources. To a certain extent expanded electrification in each of these countries would require considerable investment of capital in the development of energy resources: England may be able to buy cheaper

⁷ In addition, as noted in Table I, in the absence of data on actual mining costs in this region, we were forced to fall back on estimates based on United States experience. Actual costs in the area, therefore, may be higher than the costs we show. Similarly, the estimated costs of electricity based on coal shipped from other parts of the Soviet Union may be too low.

electricity in the future at the cost of large-scale investment in the modernization of coal mines; China, India, and the Soviet Union may be able to expand electrification through hydroelectric development or by the development of new coal mines and the modernization of old ones. Atomic energy, either alone or in conjunction with other energy resources, might possibly offer a faster route to expanded electrification or one requiring a smaller total investment of capital.

II. *Economic Effects of the Use of Atomic Energy*

On the basis of the comparative costs of producing electricity from atomic and non-atomic sources, it appears possible that atomic fuels may replace or supplement existing sources of power in some parts of the world at an early date. The affected regions will not necessarily be areas remote from existing energy resources as can be seen from the fact that atomic energy may prove cheaper than coal in a country like Great Britain. The figures presented above are, however, purely suggestive and it would be incorrect to draw any hard and fast conclusions with respect to specific areas from them. As a result, our discussion of the economic effects of the use of atomic energy is not limited to the specific areas for which data are shown above. We consider, first, the savings which might be involved in replacing fuels currently used in the generation of electric power by atomic energy; and, second, the unique developmental possibilities opened up by atomic power.

The total saving in an economy such as our own as a result of the use of cheaper fuel in electricity generation may be seen from the following over-all figures. The amount of fuel consumed in the United States in 1942 for the generation of electricity by central stations was about 80 million tons of bituminous coal equivalents.⁸ If we assign an average value of \$6.00 per ton of coal equivalents at the power station, we get a total value of about 500 million dollars for fuel consumed by the electric utilities. This figure could be increased to include fuel consumed by certain industrial establishments in the generation of their own power, and it would still come to no more than a fraction of 1 per cent of our total national income of about 150 billion dollars. Thus, if all the fuel currently used in the generation of electric power were replaced by a fuel which costs nothing, the savings in our economy would be very small. The savings per unit of electricity would be greater for countries in which fuel costs are higher than in the United States, but few of these countries are power-based to anything like the same extent as the United States.

⁸ J. M. Gould, *Output and Productivity in the Electric and Gas Utilities* (National Bureau of Economic Research, 1946), p. 163.

Obviously, however, this type of calculation does not provide a measure of the full economic effect to be expected from the possible cheapening of power through the introduction of atomic energy, nor is it even a measure of the major economic effect. For the major economic importance of the cheapening of power in any part of the world is to be found not in the cost-reducing effects, as such, but in the growth in economic activities which may result therefrom. In one sense the large-scale development of hydroelectric power by the TVA merely reduced the cost of power in the Tennessee Valley, but we do not think of this saving as a full measure of the economic effects of TVA, because the principal effect of cheap power has been to expand the economic life of the region. The domestic demand for electricity has grown as a result of cheaper rates, and has brought with it the extended wiring of homes, the introduction of new electrical appliances in the home and on the farm, the proliferation of service activities related to electrification, etc. Cheap power also encouraged greater industrialization by making new combinations of productive factors economically feasible. The industries developed in the first instance as a result of the availability of cheap power have been electroprocess industries which, in turn, have served to attract a variety of secondary industries. These developments and many more tended to reinforce one another and merge in a general process of growth.⁹

Similar developments on a varying scale could occur elsewhere as a result of the cheapening of power. The number of areas opened up to this kind of development by atomic energy are very much greater than with other energy resources because it is not bound to a specific site in the manner of water power, nor is it costly to transport in the manner of ordinary fuels. Thus, one of the great promises of atomic energy lies in the development of regions remote from other energy resources. In such cases the important effect is to be sought in the pervasive influence of power in the economic development of an entire region as in the Tennessee Valley, rather than in the savings involved in substituting one source of power for another.

We must note, too, that our calculation of the over-all savings involved in the possible cheapening of power obscures the differential importance of atomic energy in the development of specific industries. It is to be expected that in an advanced economy such as our own, the impact of atomic power will be felt largely through its effects on the important energy-consuming industries. Costs in such industries might be reduced substantially either through the use of cheaper power in present locations; or through the location of production in new

⁹ David E. Lilienthal, *TVA: Democracy on the March* (Harper, 1944).

centers in which atomic fuel is brought to raw materials, which, in the past, had to be shipped to fuel for processing; or through a combination of the two causes. Examples of industries in which location of production, costs of production, or both could be affected by the advent of atomic power include the electroprocess industries such as aluminum, ferroalloys, and chlorine; and important heat consuming industries such as metal smelting, cement, glass, clay products, and pulp and paper.

To illustrate specifically the type of development which could result from the use of atomic power, we consider its possible significance for aluminum, an important electroprocess industry. Table II presents data on those components of costs in the production of aluminum which might be affected by atomic power.

Since power accounts for roughly 20 per cent of the cost of pig aluminum, it is clear that a substantial reduction in total costs could be achieved through reductions in power costs. Because their power requirements are so great, aluminum reduction plants have located themselves close to sources of cheap power. The plants covered in Table II obtain power at an average cost of less than two mills per kilowatt-hour from nearby hydroelectric power stations. Atomic power plants may be able to match these low costs at some time in the future, but it is questionable that they will lower electricity costs even further. It may be concluded from this fact that costs in the aluminum industry, as presently constituted, probably would not be seriously affected by the advent of atomic power.

However, another extremely important element in aluminum costs is the transportation of bauxite and alumina. The Alcoa plants covered in Table II derive their aluminum from bauxite mined in Dutch Guiana. The bauxite is shipped to an ocean port in the United States (in this case Mobile) for the first stage in the reduction process: the conversion of bauxite to alumina. If the bauxite is shipped dry, approximately 1.7 tons are required per ton of alumina. The alumina produced in Mobile is then shipped to plants close to cheap power for the last stage in the production of the metal: the electrolytic reduction from alumina to aluminum. Two tons of alumina must travel to these plants for each ton of aluminum produced. In total, therefore, the cost of transporting 3.4 tons of bauxite from Dutch Guiana to the United States and 2 tons of alumina from Mobile to aluminum plants in various parts of the country is included in the cost of producing a ton of aluminum.

The transportation of aluminum raw materials which enters into the cost of producing aluminum results from the need to bring raw materials to cheap power. Under present circumstances, it would be even

more costly to bring power to raw materials since roughly 10 pounds of coal would be required to produce sufficient power for the reduction of 1 pound of aluminum, while only 3.4 pounds of bauxite need be shipped to power. The relationship between the weight of raw materials and the weight of fuels required per ton of aluminum could, however, be completely reversed by atomic fuels, one pound of which yields

TABLE II
COSTS OF POWER AND TRANSPORTATION OF BAUXITE AND ALUMINA IN THE ESTIMATED
AVERAGE POSTWAR COST OF PIG ALUMINUM IN ALCOA PLANTS^a

	Cents per Pound of Pig Aluminum	Per cent of Total Cost
Power for electrolytic reduction of aluminum (9 kilowatt-hours per pound of metal)	1.73	19.6
Transportation of bauxite and alumina	1.24	14.0
a. Bauxite, from Dutch Guiana to Mobile, Alabama	0.55	6.2
b. Alumina from Mobile to electrolytic aluminum plants	0.69	7.8
Other costs	5.87	66.4
Total cost	8.84	100.0

^a Source: Adapted from data in "Aluminum Plants and Facilities," *Report of the Surplus Property Board* to the Congress, September 21, 1945.

enough energy to produce 250,000 pounds of aluminum. Thus, 1 pound of atomic fuel could be shipped to bauxite instead of shipping close to 1 million pounds of bauxite to power.

The size of the cost reductions which might result from bringing power closer to aluminum raw materials may be judged from Table II. For example, if aluminum reduction works could be based on cheap power at Mobile, a saving of close to 8 per cent in production costs would be effected, all other factors being equal; and if an integrated aluminum works could be based on cheap power in Dutch Guiana, a saving of 14 per cent in costs could result.

Clearly such a calculation does not provide a basis for undertaking the development of aluminum production at new locations; the availability of other raw materials, the adequacy of the labor supply, and the cost of transportation to possible markets are among the other economic factors which would have to be considered. It does, however, illustrate the type of economic factors which may come into play in determining the aluminum industry's structure if cheap power can be made available, wherever needed. Perhaps atomic power will reduce power costs at Mobile, Dutch Guiana, or other places sufficiently to encourage the development of new productive activities. This would result not only in a quickening of economic activity in the regions affected but also in reductions in the cost of aluminum production which might prove

important in awakening new demands for aluminum and its products throughout the world.

In discussing the economic effects of atomic energy, the following points have emerged: Measured purely in terms of the savings involved in substituting atomic fuels for other fuels in the generation of electricity, the economic importance of atomic energy does not appear to be great. However, this calculation neglects the fact that historically the cheapening of power has been of major importance in economic growth, a factor which transcends in importance the savings involved in the substitution of one fuel for another. In this connection, it was noted that the unique mobility of atomic fuel renders it ideal for the purpose of providing cheap power in regions remote from other energy resources. Finally, it was stressed that even in regions with abundant fuel resources, atomic energy might have important implications for the major energy-consuming industries. Such industries could experience reductions in production costs either through the cheapening of power, or, as may be possible with aluminum, through the development of production at new locations in which atomic fuel is brought to raw materials which had previously to be shipped to other sites for processing. It was suggested that this could have a double-edged importance, resulting both in economic expansion in the regions affected and in the growth of demand for those products whose costs had been reduced.

III. *Concluding Remarks*

To this point in the discussion we have considered two main topics: the cost of producing atomic power, and the economic effects of the use of atomic power. Both were discussed on the assumption that economic factors would be allowed full sway in determining the manner in which this new force will be exploited. However, the enormous military importance of atomic explosives renders the exploitation of atomic energy inescapably subject to noneconomic considerations. This is true whether there is international control or not. In either case political considerations will take precedence over purely economic goals.

If the nations of the world do not agree on the international control of atomic energy, it is likely that an atomic arms race will occur. Under such circumstances it is probable that atomic power will result, if at all, only as a by-product of the production of atomic explosives. The cost of power will in this case be arbitrarily determined and will depend on the size of the military subsidy. The choice of areas in which atomic power will be made available will be determined by security considerations, and might be completely unrelated to the relative urgency of the need for power.

International control of atomic energy could also have serious eco-

nomic implications. It is possible that the control plan which governs the development of the world atomic energy industry may impose restrictions with respect to the design of atomic piles as a security measure.¹⁰ The existence of this type of institutional rigidity could result in higher costs of atomic power than if there were complete freedom of choice with respect to plant design. Furthermore, security considerations might dictate a severe limitation on the size of the world atomic energy industry—and its distribution—in order to minimize the dangers from diversion of materials or seizure of plant.¹¹ This factor could operate to vitiate, in part, the important possibilities of atomic power in expanding economic life in regions remote from other energy resources, and in encouraging new industrial locations through the availability of cheap power, wherever needed. Whether, and how severely, political forces will limit the economic benefits of atomic energy, time alone will tell.

¹⁰ For example, the Acheson-Lilienthal plan for the international control of atomic energy provides that certain plants (producing approximately one-half of the total world output of atomic power) shall be designed in such a way that they will not be able to produce new fissionable substances.

¹¹ This consideration has been stressed in certain materials submitted by Mr. Baruch to the United Nations Atomic Energy Commission. See, for example, *Technological Control of Atomic Energy Activities*, Scientific Information Transmitted to the United Nations Atomic Energy Commission by the United States Representative, Vol. VI, October 14, 1946.

DISCUSSION

LEWIS N. DEMBITZ: Mr. Coale's paper makes it clear that we do not have any answers yet to the problem of reducing this country's vulnerability to atomic bombs. Only a start has been made toward mapping out the problem.

The question whether or not this country should undertake a great defensive program and if so, what lines the program should follow and how the related economic problems should be solved, involves a job of tremendous magnitude for the economist. I should like to emphasize also that the whole subject will require continuing study for as far into the future as one can see. Regardless of what decisions are made in the next year or two—whether they lead to the conclusion that a full-scale defensive program should be initiated along some particular lines, or to the conclusion that no such program should be initiated for the present—in either case the decision will have to be under continuing review and subject to change at any time in accordance with new developments. One of the most serious dangers to be avoided is the danger of becoming too firmly committed to a defense program based on 1947 or 1948 considerations, and then being attacked in some future year—say 1970—when our defensive system is obsolete.

The problems of defense against bombing may appear to lie primarily in the fields of military science, industrial engineering, and the natural sciences rather than the field of economics, and I should like to point out that economic questions are more thoroughly involved than might be apparent at first sight. For example, let us assume that analysis from the military and technological viewpoints has indicated that we must assure a certain continuing supply of steel products during any prospective war in order to assure surviving the war. We might assure this supply perhaps by building a number of small steel plants in widely-scattered locations; or perhaps by building or rebuilding our large steel plants with such rugged construction that nothing except an almost direct hit would seriously affect them; or perhaps by arranging for large stock piles of semifinished steel to be stored near every steel consuming industry; or perhaps by making plans so that most of the vital steel products could in extreme emergency be made out of substitute materials; or by some combination of these methods. Assuming that all these methods are physically feasible, it is, of course, an economic problem to determine which is preferable, considering the extent to which each would call upon abundant or expandible resources, and thus involve a minimum in real cost to our economy, or the extent to which scarce resources might be required. The decision as to which of these methods is to be used will of course be intertwined with decisions as to transportation facilities, as to the locations of steel consuming industries, and so forth. These decisions in turn are dependent not only upon military and technological considerations but also upon the relative economic costs that different decisions would involve. Thus, the entire plan of defense will have to be developed on the basis of a thoroughly intertwined complex of economic and other considerations. The objective is a complete co-ordinated plan that will be adequate from a military view-

point and for which the total real cost to the economy will be kept within reasonable limits.

In one sense the designing of a plan of defense is an even more difficult task than the laying out of an industrial system would be, because the plan of defense must not only produce a production system that will work; it must also produce a large number of subsidiary production systems each consisting of the original system minus some part assumed to be destroyed, such that each of these subsidiary systems will also work.

The costs of a plan of defense might be met largely out of the public treasury, or they might be met largely by requiring each enterprise in a strategic industry to stand the costs of reducing the vulnerability of its own operations. In the latter case, where each company has to adopt less efficient production methods or less efficient locations or has extra expenses for plant construction or for excess plant maintenance, this would be reflected directly in higher costs—meaning higher prices for its products. Regardless of how the program is financed, our economic system would have to adjust to a lower efficiency of production, which leads to the questions how far this could be offset, and the standard of living maintained, by increased efficiency in other directions or by more thorough use of our manpower and other resources. Thus the economist will be called on to state whether we can effectuate a given plan of defense without a reduction in the national standard of living that might be intolerable in peacetime.

A most important question is the extent to which the capital investment required by such a plan can be timed in a contracyclical manner so as to minimize the real cost. Decisions on timing, however, will have to be based largely on noneconomic considerations—such as how long it is considered safe to defer a given protective measure for the purpose of reducing its economic cost.

It is clear that all aspects of our national life are liable to be affected by this defense problem, and it therefore seems essential that the problem be made the subject of widespread intelligent thought and discussion. Some kinds of information will, of course, have to be surrounded by a high degree of secrecy, but many kinds ought to be widely publicized. One reason is that when the time comes to consider the appropriations or other legislative measures that would be needed to put any thoroughgoing plan of defense into effect, a well-informed public opinion will be needed to back up such measures, or possibly to back up their legislators in opposing the adoption of unsound or hysterical measures. An even more important reason for publicity, I think, is this: the main purpose of any preparedness program is not to prepare for war but rather to prevent war, by convincing any potential attackers that the United States is prepared to withstand any possible attack. Thus, subject to the obvious requirements of security for some kinds of information, there will be much room for intelligent public discussion, of kinds in which economists should be prepared to take a leading part.

PHILIP SPORN: The possibilities of generating electric power by nuclear piles more economically than by presently used means warrant a full-scale

and thorough investigation to determine the economic aspects of the new means at the earliest moment the necessary data for that purpose become available. From that standpoint Mr. Schurr's paper is to be welcomed. Also Mr. Schurr's basic approach of considering the subject on the assumption that economic factors would be allowed full play in determining the manner and—the addition is mine—the location in which this new force will be exploited, can be highly commended.

But having said this much it is necessary to go further and ask: Are the necessary data for making an investigation of the economic aspects of nuclear power available? I hardly think so. For what have we actually to guide us as a base for such an evaluation? So far as I know, we have but two small bits of general information of so approximate a nature as to make difficult its classification even as a "guesstimate." I refer, of course, to the Thomas report which is well known, and to the Condliffe report which is mentioned by Mr. Schurr and referred to subsequently as the California Report, which I have not had an opportunity to go over.

The Thomas report in particular has been widely quoted on its estimated figure of cost of energy at 100 per cent load factor of 8 mills per kilowatt-hour. Less widely quoted, in fact hardly mentioned, is this full observation concerning a possible commercial power pile:

A number of changes in design and operating technique would be necessary. *An extensive research and development program would be required to solve the problems which will arise. These problems appear difficult but not insurmountable.* The complete nuclear power plant would include not only the pile itself, but all of the auxiliary equipment and installations needed to operate a continuous thermal power plant.

While no such plant has ever been built or even designed, it is felt *probable* that a large stationary nuclear power plant could be built. Based on prices now current, a plant designed along the lines indicated and producing 75,000 kilowatts could be built in a normal locality in the eastern United States for approximately \$25,000,000. On the assumption that the plant would operate at 100 per cent of capacity and that interest charges on the investment would be 3 per cent, the operating cost of the plant would be approximately 0.8 cents per kilowatt-hour.

Please note the many qualifying statements in this short, two-paragraph quotation from the Thomas report.

It may be that the California report contains data of a more positive nature but I doubt it, again because of the lack of fundamental data. To the best of my knowledge the Oak Ridge experimental power pile is somewhere in the design or design-completed stage. But it is a safe guess that the first pile is not going to be a 75,000 kilowatt pile and that as a thermal plant it will leave a great deal to be desired as far as economy and efficiency are concerned. That is said in no critical spirit. I am merely giving the designers credit for acting on the principle that it is well to learn to walk before starting to run a race. But with all this glaring gap in our technological line of knowledge and with almost no actual experience on costs, or even engineering cost estimates, it seems to me that an economic study becomes almost impossible and one is forced back on broad generalization and speculation. That, it seems to me, is what the author really has been forced to do in substance and perhaps the paper should be discussed from that standpoint. But the author has also attempted to take in more territory than that and it may,

therefore, be pertinent to point out some of the errors introduced by generalized treatment.

For example, he makes a statement that energy at the present time is generally most cheaply produced in hydroelectric developments. Without qualifications such a statement is obviously incorrect. Volumes have been written on the competitive cost of hydroelectric energy and steam-electric energy and the discussion still continues. Some hydroelectric developments have produced very cheap energy, but so have numerous thermal plants. Similarly, volumes will probably be written on the subject of the cost of atomic energy versus the cost of other forms of energy. We have made a beginning and the discussion will probably continue just as the discussion of hydroelectric energy versus steam-electric energy will continue. Until it is possible to get into a specific case with the necessary engineering data on costs available, an objective discussion of the economic aspects of atomic energy will be out of the question.

The author appears to assume that an atomic energy plant consists of nothing but an atomic pile, although the conception today—I admit that it may change as we go along—is that nuclear fuel would merely be substituted for the conventional fuel in a boiler where steam will be generated and the steam used through steam turbines similar to those in current use. This means that an atomic plant cannot be located anywhere. The subject of condensing water must be considered. It is true that the gas turbine may come into the picture. But where coal is as plentiful and generally cheap as in the United States, the gas turbine has been able to find few enthusiastic backers.

In Table I there are given some figures on the cost of steam power in various sections of the world compared with the cost of atomic power, the latter being estimated both on the basis of the Thomas report and on the basis of the California report. The Thomas report actually does not go into details of arriving at a figure of 8 mills but with the knowledge that a nuclear pilot plant has been estimated at a cost of \$333 per kilowatt, and that interest charges on investment have been calculated at 3 per cent, a reasonable breakdown can be constructed. Carrying out such a calculation I arrive at a figure of cost of energy at 50 per cent load factor of 12.8 mills instead of 10 mills used by Mr. Schurr. The California figure is based on a 45 per cent load factor operation. Unless the Thomas figures for capital cost are totally out of line it seems hard to visualize how a figure of 4 mills could be developed. However, leaving these figures with no more than this comment, I should like to make this observation about the remainder of the figures in Table I.

As to the figures for foreign countries, I wonder how authentic they are, how up to date they are, and what kind of technical performance on the existing power facilities they represent? My point is: If they represent, as I am sure in many cases they are bound to—and I base this on knowledge gathered by personal observation in some of the foreign countries—performance of plants technically obsolete by modern standards, there is not any point in comparing them with performance expected out of a nuclear plant, the

physics of which has just barely been born and the technology of which has not begun to be developed.

As to the American figures, I can speak with more authority and make this observation that while the level of values used in Table I is somewhere near right, the figures are sufficiently off to cause one to pause before making any rigorous comparisons with figures on nuclear energy. For example, the cost of energy at the mouth-of-mine is given in Table I by the figures 5.75 to 6.75 mills per kilowatt-hour. Using a cost per kilowatt figure of \$120 and again the figure of interest of 3 per cent, with corresponding figures for depreciation, taxes, and maintenance utilized in the breakdown of the Thomas figures, and using a cost of fuel of $12\frac{1}{2}$ cents per million B.T.U. (about \$3.50 a ton for high grade coal) and a thermal performance of 10,000 B.T.U. per kilowatt-hour, I arrive at a figure of total cost at 100 per cent load factor of 3.22 mills per kilowatt-hour and at 50 per cent load factor of 5.89 mills. I do not comment at this point upon the qualifications that have to be made with regard to the practicality of operating any plant at either of those two load factors but nevertheless the basis of calculation is the same as that used in the breakdown of the Thomas figures. With the cost of coal at \$7 (26 cents per million B.T.U.) and the cost of a power plant at \$133 per kilowatt, I arrive at a figure for 100 per cent and 50 per cent load factor respectively of 5.12 and 7.14 mills per kilowatt-hour. These are not so very far apart from figures given in Table I but it seems to me that a ratio of 8.0 to 3.22 is an entirely different affair from a ratio of 8.0 to 6.75.

The whole trouble with the figures is that we are attempting to compare fairly precise figures that are determinable with engineering accuracy on ordinary fuel burning plants with figures arrived at on the basis of very broad estimates for nuclear plants where we not only have almost no knowledge on cost of capital facilities but no really reliable figures on the cost of the nuclear fuel itself. And again to point up what I have already stated I think we are going to arrive at bad concepts of what the relative economics of competitive factors are if we merely compare expected performance of nuclear plants with the average performance as it exists in the United States today. Thus the average performance of thermal plants in the United States in the year 1945 showed a figure for fuel requirements of 16,900 (1.3 kilowatt-hour) B.T.U. per kilowatt-hour of electric energy. This represents a thermal efficiency of 20.2 per cent. The most efficient straight steam-electric plant in the United States is the Twin Branch Station, with which the discussor has been associated both in design and operation. This plant operates with a performance of 10,200 B.T.U. per kilowatt-hour, or an efficiency of 33.13 per cent. However, the discussor also has just completed the design of two new stations, one to be located in Indiana and another to be located in West Virginia, each of which will show a thermal performance of 9,250 B.T.U. or a thermal efficiency of 36.9 per cent. This is almost double the thermal efficiency of the average performance for the year 1945 in the United States. Because a nuclear power plant, when and if it becomes technologically feasible, will not only utilize if not a weightless at least a freightless

fuel, at the expense, however, of a much higher capital cost, it is particularly important not to treat this phase of the problem too broadly. For while a thermal power plant using nuclear fuel will be affected to some degree by the efficiency of the thermal cycle, such effect will be minor relative to the effect improved thermal performance will have on a power plant using more conventional fuels. This I am sure needs no further elaboration but does need stressing.

I have gone into all this detail in order to bring home this point more effectively. If we are not going to go astray in our discussions of the economics of nuclear energy, it is necessary to compare new technology with new technology and, therefore, nuclear plants which may represent the latest technology should under no circumstance be compared with anything but the best that can be obtained with existing technology. But to do that it will be necessary that we first get more reliable information on the investment and probable operating costs of nuclear plants. This appears to me to be impossible until the technology of such plants is further developed.

Even though I find a number of points on which to differ, I shall not, because of lack of time, attempt to go into a detailed discussion of the second phase of the author's paper treated under the heading of "Economic Effects of the Use of Atomic Energy." I would, however, like to make one observation on the treatment of the possibilities that nuclear energy might open up to produce aluminum where the bauxite is mined. I very much question whether the minor gains in the saving of transportation costs would be enough to swing a decision to locate an appreciable percentage of the aluminum capacity required by the United States, say, to Dutch Guiana, if we consider the security angle and the increased jeopardy to such security that such a move might entail.

In all of this I hope I have not given the impression that I undervalue the possibilities of nuclear energy and its development in the future. If nuclear energy will give us more economical power than we can obtain by the use of our hydroelectric resources and particularly our fuel resources, then it certainly should be developed, although obviously it will find application first in locations and in countries that are not so richly endowed as we are with economical normal fuel resources. The possibilities that nuclear energy appears to offer are unquestionably pregnant with the greatest economic significance and those possibilities need to be explored and developed, particularly since it now appears that the most fruitful peacetime application will be in the field of electric power generation. But until we have built the pilot plant at Oak Ridge and perhaps another one after that, and perhaps one plant of a capacity say somewhere between 10,000 and 100,000 kilowatt rating, I am fearful that we will not have the knowledge necessary to carry out an effective economic study of nuclear energy for use in electric power generation and any such study carried out before then is bound to be more or less a speculation.

Finally I want to underscore the author's concluding remarks; i.e., that the enormous military importance of atomic explosives renders the exploitation of atomic energy inescapably subject to noneconomic considerations and

unless full and effective international control is developed political and national security considerations will take precedence over purely economic goals. Perhaps even as the author states, these considerations will become dominant even though we have international control.

One more point that might be appropriately made here. Except in the United States of America, there is a world-wide shortage of electric power. In the United States we are more fortunate, perhaps because of greater foresight or the better job that we did in balancing our production during the war, or merely because our electric power industry was more fully developed. Throughout the world, however, programs for expanding electric power facilities are going on. In the United States, for example, generation facilities are being expanded by some 7,000,000 kilowatt of capacity. So far as I know none of those entrusted with the responsibilities of supplying their respective countries with adequate power resources, whether in the United States, Great Britain, France, Switzerland, or Russia, to name only a few of the countries, is retarding a developmental program based upon using existing energy sources in order to take advantage of the proposed newer methods of generation by nuclear energy. It is to be hoped that, while keeping their eyes and minds open and on the alert and where possible co-operating in the development of more economical sources of energy, if such seems attainable, they will still not neglect their responsibilities for keeping the economic systems of their respective countries from suffering under the crippling handicap that results when adequate supplies of electric energy are unavailable. To paraphrase Voltaire, "We must continue to cultivate our garden with the tools we have today."

SAM H. SCHURR: There can be no disagreement with Mr. Sporn's point that the data on the costs of atomic power are not precise and must remain more or less vague until such time as atomic power plants are constructed. The essential difference between us seems to be that Mr. Sporn believes that the lack of precision in our knowledge renders economic analysis impossible at this stage, while I feel that analysis can and does result in the clarification of several important points.

Thus it seems to me relatively unimportant that the limits of the estimated range of atomic costs may have been incorrectly placed at 4 mills and 10 mills, and that the upper limit of the range should perhaps be 12.8 mills. For I conceive that the important point with respect to current estimates of the cost of atomic power is that they are in the neighborhood of coal-steam-electricity costs in various parts of the world. It appears, therefore, that even though we cannot calculate exact figures on atomic costs, we can nevertheless state that atomic energy will provide a fairly cheap source of power in certain places, judged by conventional standards. It seems to me that this information is of great importance when coupled with the known fact that atomic fuel is practically weightless and can, therefore, be brought to any region of the world at infinitesimal transportation costs.

Apart from this basic disagreement, Mr. Sporn has criticized the analysis

on the grounds that it does not compare atomic costs with costs based on the best modern coal-steam plant technology. He states that, particularly for foreign countries, our coal-electricity costs may be based on plants technologically obsolete by the latest standards. This is not so; see footnote *a* of our Table I.

The nature of the performance of the assumed plant on which all of our estimates of the cost of coal-steam electricity are based may be judged from the figures used by Mr. Sporn. To test the accuracy of our estimated costs for the United States, he has derived electricity costs based on coal prices comparable to the prices used by us, for a plant with a thermal performance of 10,000 B.T.U. per kilowatt-hour—a performance somewhat better than the Twin Branch Station which Mr. Sporn considers the most efficient steam-electric plant in the United States. He finds, on this basis, that our figures are “somewhere near right.” To cite a specific example: for power stations at the mine mouth, he derives a kilowatt-hour cost of 5.89 mills, while in Table I we show a range of 5.75-6.75 mills. I consider the two estimates sufficiently close to justify the statement that our estimates of coal-steam costs are based on an assumed plant which represents the best modern practice in the United States. Let me stress again that this plant has been used by us to estimate electricity costs in all regions included in Table I, and that the difference in coal-electricity costs shown in that table are due entirely to variations in the cost of coal in the several regions covered.

I believe part of the difference between Mr. Sporn and myself is that from his standpoint the difference between 5.89 mills on the one hand and the range of 5.75-6.75 mills on the other is significant. Possibly decisions with respect to contracts for the construction of steam power plants have been made on margins as narrow as this. This analysis is, however, not designed to yield results of sufficient precision to serve as a basis for investment decisions (an undertaking which would, in any case, be somewhat premature with respect to atomic power). Rather its purpose is to provide a perspective for the judgment of the possible economic importance of atomic energy in various parts of the world. For that purpose small differences in cost are of considerably less importance, for they are lost in the rather broad range of coal-electricity costs in the world as a whole.

As information on atomic costs becomes more precise, it is to be hoped that analyses of the economic importance of atomic power will be brought into sharper focus. I believe, however, that even on the basis of information currently available sensible economic judgments can be made.

JACOB MARSCHAK: The secular trends favoring or impeding the development of electricity based on fission must be considered on the supply (or cost) and on the demand side separately.

The supply price of atomic power relative to the supply price of power from coal and waterfalls will depend on: (1) the trend of price of coal in old industrial areas (Britain) due to exhaustion of better mines and to increased adverse mobility of mining labor; (2) the relative speed of technical

improvement in nuclear fission and its auxiliary processes on the one hand, and the utilization of coal (including recent attempts at coal gasification), oil (growing use in locomotives), and water power (increasing transmission distances) on the other.

The demand for atomic power will depend on: (1) improvements in electric furnaces and kilns; (2) the speed of exhaustion of easily reducible higher-grade ores, especially near world's industrial markets or water power (United States, Scandinavia); (3) the speed of developing—by loans and policing measures—of remote centers of demand for electricity: ore deposits (South Africa, South America, Siberia), old settlements (interior China, India), new settlements (airfields, new harbors and irrigation projects)—the “developing” being understood to cover not only the building of mills, houses, and highways but also education, and especially satisfactory policing from the point of view of the interested political power.

The economic effect on the United States would be mostly an indirect one, through the competition of and added exports (of goods, services, and personnel) to new development areas of the globe rather than through any significant cheapening of electricity at home.

The connection between atomic economics and world politics is thus due not only to the technical relation between atomic energy and weapons but also due to the role that atomic energy may play in the different speed of development in various areas (especially in the backward areas).

PUBLIC DEBT: HISTORY
ORIGIN AND GROWTH OF THE NATIONAL DEBT IN
WESTERN EUROPE

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I

A national debt is one of the few important economic phenomena without roots in the Ancient World. The accumulation of treasure in peacetime, arbitrary sequestration of resources in wartime, and extraordinary taxes in times of emergency precluded significant public indebtedness by the great powers of classical antiquity. Because of weak central governments, uncertain rules of succession, a virtual lack of public services, and feudal support of military operations, national debts were neither necessary nor possible in the early Middle Ages. The nascent states of Western Europe began to borrow by the middle of the thirteenth century, and modern methods of issuing and transferring public obligations arose even earlier in the Italian city states.¹ But owing to the scarcity of liquid capital, the canonical and civil opposition to interest upon loans, and the instability of central governments, the sums borrowed were never large. The debts were usually guaranteed by pledges of jewelry, specific revenues, or real property; and almost invariably they were regarded as personal obligations of the reigning sovereign. The prevalent tendency for monarchs to default upon the debts of their predecessors prevented continuity or accumulation. Hence the present paper will begin with the modern era. Owing to the rigid time limit, the discussion will be confined to England, a leader in solvency and technique, and France, the country that has been most violently disturbed by its national debt.

Years of patient and skillful research by economic historians must be spent on the contemporaneous records of the French treasury before one can estimate satisfactorily for any date prior to Waterloo the principal of the French national debt, the net yield to the government of the obligations outstanding, the annual interest due, or the interest actually paid. Moreover, a great deal of spade work will be required to eliminate errors in these estimates for the nineteenth and twentieth centuries. The practice of borrowing upon funds derived from different localities, tax farmers, tax receivers, and classes of imposts complicates the problem. The irregular termination of life and term annuities, intermittent operations of the sinking fund, and arbitrary reductions of

¹ Luigi Cibrario, *Della Economia Politica del Medio Evo* (Turin, 1829), pp. 530-538.

principal and interest on a sliding scale are difficult to follow. The large floating debt resulting from arrearages in salary and interest payments and from purchases of supplies on credit from numerous and scattered contractors are also stumbling blocks. Data needed to understand the significance of the French debt such as changes in national income, annual revenues of the central government, indebtedness of local governments, commodity prices, population, and wealth are pathetically inadequate. Small wonder that wide margins often separate the estimates of even the best informed contemporaries, upon whom one interested in the history of the French national debt has to rely.²

II

Philip the Fair (1285-1314) raised funds by borrowing as well as by debasing the coinage, and Henry IV (1589-1610) recognized that the Crown owed debts contracted before 1375;³ but the sums were negligible. For practical purposes the national debt began in the reign of Francis I. Following the loss of Milan, the key to northern Italy, on September 15, 1522, Francis I borrowed 200,000 francs, then called *livres tournois*, at 12½ per cent from the merchants of Paris, to intensify the war against Charles V. Administered by the city government, this loan inaugurated the famous series of bonds based on revenues from the capital and known as *rentes sur l'Hôtel de Ville*. Again at war, Francis I borrowed 300,000 francs in 1536-37, and 225,000 in 1543, from Parisian businessmen at 8½ per cent, bringing the total loans raised at Paris to 725,000 francs. Francis I also obtained advances from other cities, but the amount is not known. Henry II (1547-59) borrowed 4½ million francs at Paris and very large sums from other parts of the kingdom. In 1560 Catherine de Medici, Regent for Charles IX, informed the nobles that the Crown owed 42 million francs; and this figure has seemed reasonable to historians. Catherine attempted to amortize the alarming debt, but internal disorder frustrated her plan. Since wars against Philip II and the Huguenots proved far more expensive than the conflicts with Charles V, the public debt rose to 100 million francs by 1576 and to 300 million, of which 157 million were funded, by 1595. The following year Sully suspended interest payments and extinguished claims that creditors could not establish beyond a reasonable doubt. This initiated a long series of

² For example, Fromenteau, who was commissioned by the Estates General in 1576 and 1580 to ascertain the royal income by examining the records of the Chamber of Accounts, the Comptroller, and the tax farmers, stated that the revenues of Louis XII averaged 13,440,000 livres. Sully, the great Finance Minister in the succeeding reign, said that the annual revenues of Louis XII amounted to only 7,650,000 livres. [Charles Dutot], *Réflexions Politiques sur les Finances et le Commerce* (The Hague, 1738), Vol. I, pp. 358-361.

³ A. Vührer, *Histoire de la Dette Publique en France* (Paris, 1886), Vol. I, pp. 1-9.

partial defaults by the French Crown. Fearing that the load was still unbearable, in 1604 Sully annulled certain debts, scaled down others, and lowered the interest on the remainder to $5\frac{1}{2}$, 5, and 4 per cent, according to the nature of the obligation. But we lack reliable estimates of the reduction in interest or principal. Parsimonious in expenditures and skillful in raising revenue, Sully was forced to borrow on only three occasions; and the total advances did not exceed 2 million francs.⁴

In 1605-14 interest on the debt was paid promptly, but after 1615 endless delays and favoritism arose. Without stiff fees to lobbyists, many creditors lacking political influence could not collect their interest at all. The Crown arbitrarily reduced the interest on the bonds based upon the *aides* by 25 per cent and on those based upon the general receipts by 50 per cent. Civil disturbances during the minority of Louis XIII (1610-43) and the perpetual wars and power politics through which Richelieu gave France the dominant position in Europe raised expenditures enormously. Absorbed in external affairs, the Cardinal paid little attention to public finance; and the French never would have supported his costly ventures through taxation. Consequently the public debt rose to about 600 million francs by 1642, despite repeated partial repudiation of the interest and principal. The annual service charge absorbed some 45 million of the approximately 80 million francs of public revenue. At the beginning of the reign of Louis XIV (1643-1715) the debt was forcibly scaled down to approximately 250 million francs, or by considerably more than half; and the interest was reduced to 4 per cent. Yet the bondholders were influential enough, and the service charge remained high enough, for the *Parlement* and the royal party to fight bitterly over the privilege of paying it in order to win popular favor during the civil war in 1648 and 1652.⁵

The civil war during the minority of Louis XIV and the continuation of the Thirty Years' War by France and Spain until 1659 raised the interest on the public debt to about 30 million francs a year by 1661, in spite of several partial defaults under Mazarin. Since the service charge absorbed funds which Colbert needed to promote economic development, he regarded a public debt as a curse. Furthermore, he looked

⁴ Charles Turgeon, "Les Idées Économiques de Sully," *Revue d'Histoire Économique et Sociale*, Vol. XI (1923), pp. 249-250; A. Vührer, *op. cit.*, Vol. I, pp. 15-50; [Antoine Monthyon], *Particularités et Observations sur les Ministres des Finances de France les Plus Célèbres depuis 1660 jusqu'en 1791* (Paris, 1812), pp. 15-18; Sir James Steuart, *Inquiry into the Principles of Political Oeconomy* (London, 1767), Vol. II, p. 377; [François Forbonnais], *Recherches et Considérations sur les Finances de France depuis l'Année 1595 jusqu'à l'Année 1721* (Basel, 1758), Vol. I, pp. 60-67.

⁵ Germain Martin, *Histoire du Crédit en France sous le Règne de Louis XIV* (Paris, 1913), pp. 26 ff.; A. Vührer, *op. cit.*, Vol. I, pp. 53 ff.; Sir James Steuart, *op. cit.*, Vol. II, pp. 372-376.

upon idle rentiers as parasites⁶ easily incitable to insurrection. Hence Colbert drastically reduced the principal and interest of the debt in 1661 and 1664. The evidence is not clear, but apparently the bankruptcy decreased the service charge by roughly two-thirds. Colbert applied the surplus resulting from almost a decade of financial reforms and from careful administration to a further reduction of the debt, but the war against the Dutch in 1672-78 forced him to resort to loans. Owing to the declaration of partial bankruptcy at the beginning of his administration, Colbert failed to obtain funds at 5.5 per cent upon the outbreak of war with Holland. After the first successful war loan, which bore 6.25 per cent interest, he had to concede 7.3 per cent; and before the end of the conflict it was extremely difficult to obtain funds even at this usurious rate. But owing to courageous taxation and rigid control over civil expenditures, Colbert needed to borrow very little. At the close of the war in 1678 the debt stood at 157 million francs and the interest at 10,470,000 francs. Peace restored the public credit so quickly that in 1678-80 Colbert was able to refund the obligations by selling 7 million francs of 5 per cent *rentes* and 1 million of 5.5 per cents, thus reducing interest on the national debt to 8 million francs, or only one-fifteenth of the public revenue, in the wake of one of the worst wars in French history. Upon the death of Colbert, in 1683, the service charge remained at this low figure.⁷

A war with Spain in 1683-84 added 60 million francs to the public debt, and in 1684 the Crown borrowed 10 million francs to subsidize public granaries. This was one of the few obligations incurred in France before 1840 for nonmilitary purposes. The War of the League of Augsburg in 1688-97 increased the debt by 200 million francs, or almost 90 per cent. Since the interest on the new bonds ranged from 5.5 per cent in the beginning to 8.33 per cent at the end, the service charge more than doubled. But the bonds bearing 7.3 and 8.33 per cent interest were refunded the following year at 5 per cent, without serious objections from the bondholders. The War of the Spanish Succession, in 1702-13, was by far the costliest of all the conflicts in which Louis XIV engaged. Consequently the total debt, funded and unfunded, rose about sevenfold. Unable to secure adequate funds by taxation or loans, Louis XIV began to issue government paper money by 1707; and

⁶ Both Montesquieu and David Hume severely condemned public debts because of their tendency to increase idleness. Cf. Georg Schanz, "Öffentliches Schuldenwesen," in *Die Entwicklung der deutschen Volkswirtschaftslehre im neunzehnten Jahrhundert*, Essays in Honor of Gustav Schmoller (Leipzig, 1908), Vol. II, p. 5.

⁷ Henri Sée, *Histoire Économique de la France* (Paris, 1929), p. 159; A. Vührer, *op. cit.*, pp. 64, 84-85, 91-104, 112-113; Germain Martin, *op. cit.*, pp. 83 ff.; Charles W. Cole, *Colbert and a Century of French Mercantilism* (New York, 1939), Vol. I, pp. 307, 312; *Lettres, Instructions et Mémoires de Colbert*, Edited by Pierre Clément, Vol. II (Paris, 1863), pp. 57-59; Vol. VII (Paris, 1873 ed.), pp. 224-225, 400-402.

at the close of the war about 800 million francs of depreciated paper currency were in circulation. When the Treaty of Utrecht was signed, the interest payments were two years in arrears; and the national debt amounted to approximately 3 billion francs, equivalent to almost eighteen years of royal revenues. Desmarests refunded the obligations at 4 per cent and cut the principal of the debt incurred before 1680 and after 1702 by from 25 to 50 per cent. But everyone realized that the French taxpayer would not bear the remaining burden. Hence in 1715 the Duke of Orleans, Regent for Louis XV, forcibly reduced the funded debt to approximately 1,700 million francs and arbitrarily slashed the paper money to 250 million francs.⁸

The second default in two years intensified the commercial crisis which followed the long War of the Spanish Succession. The huge funded debt, the depreciated paper currency, and the acute commercial crisis were largely responsible for France's acceptance of John Law's scheme and the Mississippi Bubble. The first capital error made by Law was his inflation of the bank-note circulation beginning in October, 1719, in order to refund the entire national debt at 3 per cent. After the liquidation of Law's System in 1721-22 the national debt was fixed at 1,700 million francs, almost precisely where it stood in May, 1716, when Law's operations commenced. But owing to Law's cheap money policy, the service charge had fallen. It seems that no great change in the public debt occurred from 1721 to the outbreak of the War of the Austrian Succession in 1740. It was during this long period of peace, with a low and relatively stable debt, that Jean François Melon wrote his often-quoted and extremely influential declaration that "debts of a state are debts from the right hand to the left, by which the body is not weakened if it has the necessary nourishment and knows how to distribute it."⁹

By the close of the Seven Years' War in 1763, the funded debt had risen to 1,960 million francs; and the unfunded debt bearing no interest amounted to 400 million francs. To meet this heavy obligation, a royal declaration of November 21, 1763, provided for a survey of real property with a view to taxing it impartially. The plan to tax the privileged classes cost the Finance Minister his post. The following year a sinking fund was established in an effort to amortize the debt. But the government actually increased it by 115 million francs in the next five years.

⁸ [Nicolas Desmarests], *Mémoire de M. Desmarests sur l'Administration des Finances*, N. p., N. d., pp. 4-52; A. Vührer, *op. cit.*, Vol. I, pp. 129-139; Sir James Steuart, *op. cit.*, Vol. II, pp. 358-359; [Charles Dutot], *op. cit.*, Vol. I, pp. 92 ff.; Henri Sée, *op. cit.*, pp. 160-162.

⁹ *Essai Politique sur le Commerce* (Paris, 1736 ed.), p. 296; Henri Sée, *op. cit.*, pp. 166-167; A. Vührer, *op. cit.*, Vol. I, pp. 180-181; Earl J. Hamilton, "Prices and Wages in Southern France under John Law's System," *Economic History Supplement to the Economic Journal*, Vol. III, pp. 451-452.

In his letter of August 24, 1774, accepting the appointment as Contrôleur Général des Finances, Turgot urged Louis XV "to bring expenditures below the revenues and sufficiently below them to provide 20 million francs a year to repay outstanding debts. Without this, the first cannon shot will force the state into bankruptcy." Unfortunately, this recommendation yielded no results; and in July, 1775, the sinking fund was abolished. In spite of a forcible reduction of the interest to 2.5 per cent on a portion of the debt and to 4 per cent on the remainder (in 1770), the financial statement drawn up by Turgot shortly after he became Contrôleur Général showed that the service charge had risen to 120 million francs, or by almost one-third in eleven years of peace and prosperity.¹⁰

In the seven years from the fall of 1776 to the fall of 1783 France borrowed approximately 827 million francs for use in fighting England, thus increasing the national debt by about one-third. Largely because of the high service charge, the budget was not balanced upon the return of peace. In August, 1784, Calonne re-established the sinking fund. He provided that 4,200,000 francs a year and the cumulative interest saved be applied toward paying off the debt; and to hasten the process, in December, 1785, he authorized the questionable practice of purchasing bonds at their market price. But in his three and a half years in the Finance Ministry, beginning in November, 1783, Calonne increased the debt by at least 650 million francs, far more rapidly than it had risen during the war with England. In desperation, he induced Louis XVI, in August, 1786, to call together an Assembly of Notables to consider a plan for fiscal reform. When Calonne proposed to increase the land tax and to eliminate all exemptions in order to restore the finances, the privileged classes drove him from power. Cardinal Brienne, Calonne's successor, fared better with the Notables; but the *Parlement* obstinately refused to register a decree authorizing a series of loans (beginning with 120 million francs in 1788 and declining to 60 million francs in 1792) to cover the deficit until the new taxes could become effective. Without voluntary registration by the *Parlement*, the public refused to subscribe. In August, 1788, the puny activities of the sinking fund came to an end.¹¹

The funded debt of about $3\frac{1}{2}$ billion francs, the unfunded debt of 708 million francs, the service charge absorbing more than half the royal revenues, and the large annual deficit forced Louis XVI to summon the Estates General that convened on May 5, 1789. We now know

¹⁰ *Oeuvres de Turgot et Documents Le Concernant*, Edited by Gustave Schelle (Paris, 1922), Vol. IV, p. 110; A. Vührer, *op. cit.*, Vol. I, pp. 227, 232-233, 243, 253-258.

¹¹ Louis Blanc, *Histoire de la Révolution Française* (Paris, 1878 ed.), Vol. II, pp. 338-358; A. Vührer, *op. cit.*, Vol. I, pp. 269, 281-282, 289-290, 310-317.

that France flourished in the half-century preceding the French Revolution, and that economic conditions in 1789 were fundamentally sound. Paris was the leading financial center on the Continent, and the country was exporting considerable amounts of capital. The volume of foreign trade had risen fourfold since 1715. The ownership of land and of other forms of property was widely diffused. Although twice as large, the public debt was not nearly as heavy a real burden as it had been in the first three decades of the eighteenth century. The national debt of England was approximately 10 per cent greater than the French; and although the English debt had proved troublesome twenty-five years previously, it was then causing no great difficulty. Nevertheless, the public debt in France was an extremely important factor in the Estates General's getting out of hand and in the outbreak of the French Revolution. Much more than the oratory of Mirabeau, the large unfunded debt and the unmanageable budgetary deficit gave rise to the first issue of assignats, which resulted in one of the most disastrous inflationary episodes in history.¹²

In 1799, when the repudiation and the extinction of the debt through redemption in confiscated land and repayment in worthless currency were over, the recognized obligations had fallen to 926 million francs and the interest charge to 46 million francs, or by almost four-fifths. As First Consul and as Emperor, Napoleon was ruthless enough to levy tribute upon conquered territory and wise enough to tax his subjects in order to avoid inflation and an increase in the national debt. Hence the debt had risen to only 1,266 million francs and the service charge to only 63 million francs, or little more than a third, in 1814, when Napoleon was first defeated and exiled. But largely because of the disruption of economic life by military reverses and invasion in the two preceding years, an unfunded debt of 777 million francs had accumulated. The governments that conquered Napoleon exacted an indemnity of 702 million francs under the Treaty of Paris in 1815; and awards for private losses raised the indemnity to 1,291 million francs. The owners of property confiscated during the Revolution received 867 million francs in 3 per cent *rentes*. French intervention in Spain in 1823, under the auspices of the Holy Alliance, added only 4 million francs to the interest on the national debt and only 80 million francs to the principal. From April, 1816, to July, 1830, when the Restoration Monarchy fell, a sinking fund reduced the principal of the debt by 595 million francs and the annual interest by 54 million francs. Bonds were purchased

¹² Seymour E. Harris, *The Assignats* (Cambridge, Mass., 1930), pp. 28-36; A. Vührer, *op. cit.*, pp. 321-340; Henri Sée, "The Economic and Social Origins of the French Revolution," *Économic History Review*, Vol. III (1931-32), pp. 2-9; E. Levasseur, *Histoire du Commerce de la France* (Paris, 1911), Vol. I, p. 517.

at the market price, averaging 80.25. An additional 6¼ million francs in interest charge was saved by refunding operations. No other regime in the history of France has made a comparable record in debt payment. But, in view of the fact that commodity prices were falling sharply, the debt retirement doubtless had a pernicious effect upon economic activity. It was hardly an accident that Saint Simon, Fourier, Sismondi, and a host of other Utopian critics of capitalistic society did their best work during these fifteen years of crises and economic stagnation. In July, 1830, the national debt stood at 4,426 million francs, a little higher than at the outbreak of the Revolution; and the service charge at 197 million francs, only slightly lower.¹³

The sinking fund was active under Louis Philippe, from July, 1830, to February, 1848; but largely because of heavy expenditures for armaments, fortifications, and military roads resulting from the diplomatic tension in the 1840's, the funded and unfunded debts rose to 5,954 million francs in 1848. It seems that lower interest rates during the economic stagnation in the 1840's limited the rise in the service charge to only 12¼ million francs. The decline in tax yields during the Revolution and civil disorder in 1848, the indemnity to owners of West Indian slaves freed in that year, the expenditures for the national workshops of Louis Blanc, the repurchase of the Paris and Orleans Railway, and the assumption of obligations of the savings banks—all these increased the interest charge on the public debt by 54 million francs under the Second Republic in 1848-52. Owing to the failure to raise taxes for the Crimean War in 1854-56, the debt rose by 2,200 million francs. The Italian War in 1859 added about 600 million more, and the ill-fated venture of Napoleon III in Mexico about two-thirds as much. An armament loan in 1868 and a loan in 1870 to prosecute the war with Prussia totaled about a billion francs. The colossal indemnity of 5 billion francs to Germany and the outlays for rehabilitation brought the funded and unfunded debts to roughly 21,700 million francs in 1873, when the Franco-Prussian War had been liquidated. In a quarter-century the debt had risen more than three and a half fold, and virtually all the increase resulted from wars.¹⁴

In 1874-83 the French debt rose to 27,400 million francs. Not war but investments by the government in railways, canals, telephone and telegraph systems, highways, and public schools account for about

¹³ J. M. Fachan, *Historique de la Rente Française* (Paris, 1904), pp. 134-161; A. Vührer, *op. cit.*, Vol. I, pp. 340-418; Vol. II, pp. 18-169, 237; Charles Gide and Charles Rist, *Histoire des Doctrines Économiques* (5th ed., Paris, 1926), pp. 201-299.

¹⁴ Harold G. Moulton and Cleona Lewis, *The French Debt Problem* (New York, 1925), pp. 45-47; A. Vührer, *op. cit.*, Vol. II, pp. 238, 256-292, 300, 334-359, 368-369, 464; L. von Hirschfeld, *Die Finanzen Frankreichs nach dem Kriege von 1870-1871* (Berlin, 1875), pp. 15-18; Guiseppe Ricca-Salerno, *Teoria Generale dei Prestiti Pubblici* (Milan, 1879), pp. 127-129.

three-fourths of the obligations incurred. Colonial expansion was responsible for most of the remainder, as it was for a large part of the 10 per cent increase in the debt during the next decade. In 1894-1903 the debt rose less than 2 per cent; but, as a result of active military preparations after 1910, it advanced from 30,800 million francs in 1903 to 33,640 million in 1913. In the four decades of peace from 1873 to 1913 the public debt increased by only 55 per cent. If one can rely upon the crude figures available, in the last half of this period alone per capita income rose 45 per cent.¹⁵

On December 31, 1918, the domestic and foreign debt of France amounted to 154,393 million francs, almost five times the 1914 figure. The ingrained unwillingness of Frenchmen to pay taxes in conjunction with heavy outlays for armaments, fortifications, rehabilitation of the devastated areas, military pensions, and maintenance of the armed forces raised the debt to 315,896 million francs by November 30, 1924. Furthermore, the rate of interest on new financing was almost three times the 1913 level. On December 31, 1930, the debt, "exclusive of the foreign political obligations," stood at 267,092 million francs. Largely owing to unemployment relief in the depression, which had finally reached France, the debt rose to 319,383 million francs at the end of 1934. Continuation of the depression in 1935 and intensive preparations for the second world war in 1936-38 raised the debt to 412,575 million francs on December 31, 1938. During twenty years of peace, the aftermath of war, depression resulting largely from war, and preparation for war raised the debt 167 per cent. By the end of 1944 the French debt had reached approximately 1,800 billion francs. The second World War and the German occupation had increased it more than fourfold.¹⁶ The staggering public debt incurred during and immediately after the first World War was a major factor in the catastrophic depreciation of the franc in the twenties. The debt also generated some of the pressure that resulted in the devaluation of the franc in 1936. The disastrous losses of the *petits rentiers* and other members of the middle class played a role in the tragic military and civilian collapse of 1940. If the huge public debt now outstanding is not partially repudiated, as was the fashion before 1789, or largely paid in worthless currency, as during the Revolution, it will doubtless depress the level at which the franc will finally be stabilized and thus inflict another loss upon the already impoverished salaried workers and other recipients of fixed incomes.

¹⁵ Paul Leroy-Beaulieu, *Traité de la Science des Finances* (Paris, 1899 ed.), Vol. II, pp. 608-622; A. Vührer, *op. cit.*, Vol. II, pp. 534-545; Harold G. Moulton and Cleona Lewis, *op. cit.*, pp. 46-57.

¹⁶ "Le Budget, La Trésorerie et la Dette Publique," *Revue d'Économie Politique*, Vol. XLV (1931), p. 538, Vol. XLIX (1935), p. 647, Vol. LIII (1939), p. 998; Harold G. Moulton and Cleona Lewis, *op. cit.*, pp. 57-68, 96-115; R. P. Schwarz, "Problems of French Finance," *The Fortnightly*, Vol. CLVII (1945), p. 311.

III

Even more than in the case of France, the national debt of England originated and has grown during major wars. Except for an insignificant carry-over from the Stuarts, the debt began in 1689 with the reign of William and Mary. In the words of Adam Smith, "it was in the war which began in 1688, and was concluded by the treaty of Ryswick in 1697, that the foundation of the present enormous debt of Great Britain was first laid." At the end of this war the funded and unfunded debt amounted to 21,516,000 pounds. In 1698 Charles Davenant, the great mercantilist, thought that if England "should come to be hereafter engag'd in another long and expensive War," this debt "will be a terrible Weight upon us"; that "if those Engagements are suffer'd to continue . . . we shall be in the condition of *Spain*, unable upon any Emergency to help our Selves, or to assist our Friends"; and that a reduction of the principal was essential to a fall in the interest rate "without which Trade can never Flourish."¹⁷ In the five years of peace before the outbreak of the War of the Spanish Succession the principal was reduced to 16,395,000 pounds, or by one-fourth—the greatest proportionate reduction in a war debt ever achieved by Great Britain. The War of the Spanish Succession raised the debt to 53,681,000 pounds; and the liquidation of the South Sea Bubble increased it to 55,283,000 pounds at the end of 1722.¹⁸ In the ensuing seventeen years of peace the debt was reduced by 8,329,000 pounds, or by a little less than $\frac{1}{2}$ of 1 per cent a year.¹⁹

During the War of Jenkins' Ear and the War of the Austrian Succession in 1739-48 the debt rose from 46,955,000 to 78,293,000 pounds. Nine years of war added almost four times as much as seventeen years of peace had extinguished. A decline in the interest rate permitted the government to refund the debt in 1749 at $3\frac{1}{2}$ per cent in the beginning and 3 per cent after seven years. The saving in interest was used in paying off a part of the principal. At the end of 1755 the funded debt had fallen to 72,290,000 pounds. In 1764, the year after the Seven Years' War ended, the funded and unfunded debt amounted to 139,562,000

¹⁷ *Discourses on the Publick Revenues, and on the Trade of England* (London, 1698), Vol. I, pp. 221, 234, 264-265.

Anticipating efforts by the United States in 1933 to promote recovery through a compulsory reduction in the rate of interest on time deposits, Davenant observed: "That it would be for the general Good of Trade, if the Bank of *England* were restrain'd by Law, from allowing Interest for running Cash: For the Ease of having from thence Three or Four *per Cent*, without Trouble or Hazard, must be a continual Bar to Industry, and has lately occasion'd such a Stagnation of the Species in their Hands, as by no manner of Means can be adviseable to suffer." (*Ibid.*, Vol. I, p. 265.)

¹⁸ The opening sentence of the anonymous pamphlet, *A True State of the Publick Credit* (London, 1721, p. 1), declares that "the Calamity of the Times, and the raising Publick Credit, is now the common Topick of every Conversation."

¹⁹ Adam Smith, *Wealth of Nations* (Cannan ed., London, 1925 reprint), Vol. II, pp. 407 ff.; Bernard Cohen, *Compendium of Finance: Containing . . . an Historical Sketch of the National Debt of the British Empire* (London, 1822), pp. 197-201.

pounds, if one follows contemporaneous practice and does not count 7,300,000 pounds in government annuities outstanding. The Seven Years' War increased the debt six times as much as seven years of peace had reduced it. The high service charge at the end of the conflict was an important factor in the efforts to tax the Thirteen Colonies that fanned the flames of revolt. In the eleven years before the outbreak of the Revolutionary War the debt declined by 10,415,000 pounds, or only $\frac{2}{3}$ of 1 per cent a year. In 1783, when the war with France, Spain, and the American colonies was over, the debt amounted to 238 million pounds. Before the conflict ended, the strain on English credit was so great that 3 and 4 per cent bonds had to be sold low enough to yield almost 5 per cent; while in 1752, 3 per cent bonds had brought 106.75. Even with Pitt's new Sinking Fund, established in 1786 to wipe out the debt through the magic of compound interest, England was able to pay off only 10,250,000 pounds in 1783-92, a decade of peace and rapid economic progress.²⁰

The long war with France that began in 1793 and, except for the brief respite following the Treaty of Amiens in 1802, ended in 1815, taxed English economic strength more than any conflict in her history, with the possible exception of the second World War. As I have indicated, Napoleon drew heavily upon occupied territory to finance his operations. Whereas England not only had to support her own armed forces wherever she fought but to remit extremely large sums to the Continent to bolster up her allies, appease potential enemies, and subsidize fifth columnists. In spite of heroic taxation, which reached a level not again surpassed before 1883, the funded and unfunded debt rose to 860,856,000 pounds, or nearly fourfold. By 1797 the net cost of loans was more than 6 per cent, and by 1815 the service charge was 60 per cent greater than the total revenue of the Crown in the first year of the war. Before the conflict was over the government heard fervent pleas for a negotiated peace in order to avoid a further increase in the debt.²¹

By 1827 the debt had been reduced to 780 million pounds. The

²⁰ Robert Hamilton, *An Inquiry concerning the Rise and Progress . . . of the National Debt of Great Britain and Ireland* (Edinburgh, 1818 ed.), pp. 59-141; J. J. Grellier, *The Terms of All the Loans which Have Been Raised for the Public Service* (London, 1805), pp. 47-54; [George Gordon], *The History of Our National Debts and Taxes* (London, 1751), pp. 6-87.

²¹ N. J. Silberling, "Financial and Monetary Policy of Great Britain during the Napoleonic Wars," *Quarterly Journal of Economics*, Vol. XXXVIII (1923-24), pp. 214-227; Gustav Cohn, *The Science of Finance* (Eng. tr., Chicago, 1895), pp. 656 ff.; C. F. Bastable, *Public Finance* (London, 1927 ed.), pp. 634-636; William Morgan, *An Appeal to the People of Great Britain on the Present Alarming State of the Public Finances* (London, 1797), pp. 27 ff.; Earl of Lauderdale, *Thoughts on Finance* (London, 1797), pp. 48-55; cf. Thomas Paine, *The Decline and Fall of the English System of Finance* (Paris, 1796), pp. 1-9.

service charge had fallen to 29 million pounds, but it still absorbed half the public revenue. From 1822 to 1844 refunding operations lowered the interest charge to 3 per cent; but large deficits—by accident, not by design—in the years of severe crisis in the 1830's raised the principal to 792 million pounds in 1841. By 1852 the debt had declined to 779 millions, and the 3 per cents had reached par. In April, 1853, Gladstone announced a scheme to refund the debt at 2.5 per cent, but the Crimean War defeated his efforts. Although England paid two-thirds of the cost through taxation (while France was paying less than 8 per cent), the Crimean War increased the debt more than 36 million pounds. In his *Coal Question*, published in 1865, Stanley Jevons predicted that owing to the progressively increasing *rate* of consumption, Britain's economically exploitable coal deposits would be exhausted in about a century. Jevons concluded that heroic efforts should be made to pay off the public debt before the good coal played out;²² and by February 24, 1866, Gladstone had read Jevons' book and accepted his argument.²³ A strong speech by John Stuart Mill,²⁴ on April 17, 1866, helped Gladstone convince Parliament. Gladstone added half a million pounds a year to the budget and sketched plans to extinguish the debt in 250 years if England could avoid wars. From the peak of 808 million pounds in 1857 the debt fell to 742 million in 1886, despite the accumulation of a rudimentary telegraph system and Disraeli's acquisition of the Suez Canal stock. Two years later Goschen was able to refund the debt at $2\frac{3}{4}$ per cent until 1903 and $2\frac{1}{2}$ per cent thereafter. By 1900 the debt had fallen to 628 million pounds, the low point since Waterloo. The Boer War raised the principal to 745 million pounds in 1903, but in 1914 it amounted to only 661 million. Since 1879 the per capita debt had fallen from 22.7 to 15.3 pounds. While the French debt was increasing twenty-seven fold in 1814-1914, the obligations of England were declining 25 per cent. Sir John Clapham has estimated that the British debt "burden might have increased something like tenfold (as it was to be) without becoming more crushing than that which a much smaller and very much poorer population had carried after Waterloo."²⁵

During the first World War the British debt rose to 5,872 million

²² *The Coal Question* (2nd ed., London, 1866), pp. 236-241, 366-369.

²³ *Letters and Journal of W. Stanley Jevons* (London, 1886), pp. 218-227.

²⁴ Who, for once, was fair to Jevons. Mill spoke in opposition to a motion to reduce or repeal the tax on malt. Although Mill based his argument upon Jevons' data and praised him warmly, even in this address Mill spoke as if he, not Jevons, had concluded that, since the coal supply was expected to give out, the debt should be paid off. *Hansard's Parliamentary Debates*, 3rd Series, Vol. CLXXXII (London, 1866), pp. 1524-1528.

²⁵ *Economic History of Modern Britain* (Cambridge, 1926-38), Vol. I, pp. 318-319; Vol. II, pp. 406-407; Vol. III, p. 408; C. F. Bastable, *op. cit.*, pp. 637-642; Richard von Kaufmann, "Finanzstatistisches zu den Schulden der europäischen Grossmächte," *Jahrbücher für Nationalökonomie und Statistik*, Vol. XLIX (1887), pp. 133-138.

pounds, or almost tenfold. Continuing upward after Versailles, it reached a peak of 7,832 million pounds in 1921. Largely through elimination of the war debt of some 920 million pounds to the United States, the principal had fallen to 6,613 million pounds by 1933. Owing to heavy expenditures for armaments, it rose to 8,300 million in March, 1939. The second World War raised this figure threefold. In a speech delivered at Mansion House on October 16, 1946, Mr. Hugh Dalton, Chancellor of the Exchequer, stated that "a national debt of more than 24,000 million pounds is only endurable if the average rate of interest is kept low. Indeed, this is a necessary condition of any substantial future relief of taxation."²⁶ It will be interesting to observe whether artificially low interest rates imposed by the heavy burden of debt may not seriously interfere with future efforts to curb monetary inflation and to combat dangerous cyclical expansion.

The growth of the British debt has paralleled and stimulated price inflation during major wars since the Revolution of 1688. The reductions in peacetime, which have seemed ridiculously small to most contemporary economists, have accentuated the postwar crises. Furthermore, a large part of the reduction from 1815 to 1914 took place in 1815-50 and 1873-96. This reduction was a factor in the long and severe crises between Waterloo and the discovery of the rich gold deposits in Australia and California in 1848,²⁷ and it doubtless contributed to the stagnation of industry and trade during the great depression of 1873-96. Is it not possible that the well-known immunity of France to depressions in the last seven decades of the nineteenth century was partially due to the continuous growth of the national debt?

²⁶ *Financial Times* (London), October 17, 1946.

²⁷ In his pamphlet on the *Sinking Fund*, published in 1822, a very bad year, Lord Lauderdale argued (pp. 15-16) that "the Minister of Finance, who persuades Parliament to sanction a perseverance in the scheme of a Sinking Fund, will induce them to take by taxation, in the next six years, thirty millions out of the pockets of their constituents, already overburdened with taxes; and to deprive the nation, in want of a market, of a demand during that period, for the produce of its industry to the extent of thirty millions."

HISTORY OF THE FEDERAL DEBT IN THE UNITED STATES

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The historians have a familiar saying that history must be written anew each generation to comply with the changing theories of historical development. If we had a history of the federal debt in the United States no doubt it, too, would be rewritten from time to time to prove or disprove different theories concerning the economic effects of that debt. Unfortunately, however, we have nothing approaching a general history of the debt in this country; so the future scholar who writes such a history will not have the satisfaction of correcting the errors of his predecessors nor will he have their mistakes to warn him.

In a brief paper of this kind it is not possible to give a comprehensive treatise on the federal debt. Our discussion, therefore, will be limited to a survey of the general course of the debt and to some comments on its larger aspects.

Major Turning Points in the Federal Debt

Under Alexander Hamilton's funding plan of 1790, the struggling young nation assumed a debt of approximately 77 million dollars. Despite substantial repayments, by 1803 current deficits and the Louisiana Purchase raised the gross debt to a peak of 86.4 millions. During the next eight years, bountiful revenues from customs coupled with the conservative financial policies of Jefferson and Gallatin cut the debt by almost half, to 45.2 million dollars as of 1811.

By the close of 1815 the War of 1812 had raised the gross debt to a new peak of 127.3 million dollars, but this figure was reduced sharply in the immediate postwar years. After an interruption of several years caused by the disturbed financial conditions around 1820, debt retirement was resumed on a large scale in 1825 and by the end of 1834 the whole debt had been repaid or funds had been deposited for its repayment.¹ During the next two years there was no federal debt.

After 1837 there was considerable borrowing to cover current deficits and to finance the Mexican War, but at no time before 1860 did the debt exceed 70 million dollars. It was approximately 75 million dollars when Lincoln took office in March, 1861.

The Civil War debt reached its peak of 2,846 million dollars on September 1, 1865. For the next eight years it was reduced steadily and substantially, but in the difficult years from 1873 to 1879 there was a small increase. Beginning in 1880 there were large surpluses each year

¹ *Reports of the Secretary of the Treasury of the United States, 1829-36*, p. 465.

until 1892 and the debt was reduced to its post-Civil War low of 961 million dollars in 1893. Then current deficits and the Spanish-American War raised the total debt to almost 1.5 billions in 1899. About 300

TABLE 1
GROSS DEBT OF THE UNITED STATES AND RELATED DATA
FOR SELECTED YEARS, 1790-1946

Date	Gross Debt		National Income ^c (Millions)	Gross Debt as % of Nat. Inc.	Interest Payments on Debt ^a (Millions)	Int. Pay. as % of Nat. Inc.	Computed Int. Rate on Int. Bearing Debt (%) ^a
	Amount ^a (Millions)	Per Capita ^b					
1790 (Dec. 31)	\$ 75	\$ 19.19	\$ —	—	\$ —	—	—
1792 "	80	—	—	—	3.2	—	—
1799 "	83	15.64	677	12.3	3.2	0.47	—
1803 "	86	14.21	—	—	3.8	—	—
1804 "	82	—	—	—	4.2	—	—
1809 "	53	7.35	915	5.8	2.9	0.31	—
1815 "	127	14.67	—	—	5.8	—	—
1816 "	116	—	—	—	7.2	—	—
1819 "	89	9.24	876	10.2	5.2	0.59	—
1829 "	49	3.78	975	5.0	2.5	0.26	—
1835 "	—	—	—	—	—	—	—
1849 (June 30)	63	2.72	2,420	2.6	3.6	0.15	—
1851 "	68	—	—	—	3.7	—	—
1859 "	59	1.93	4,311	1.3	2.6	0.06	—
1865 (Sept. 1)	2,846	81.90	—	—	—	—	—
1867 (June 30)	2,650	73.19	—	—	143.8	—	—
1869 "	2,545	67.41	6,827	37.3	130.7	1.92	—
1879 "	2,299	47.05	7,227	31.8	105.3	1.45	—
1889 "	1,250	20.39	10,701	11.7	41.0	0.38	—
1893 "	961	14.49	—	—	27.3	—	—
1899 "	1,437	19.33	15,364	9.4	39.9	0.26	—
1905 "	1,132	13.50	21,428	5.3	24.6	0.11	—
1910 "	1,147	12.69	28,166	4.1	21.3	0.08	—
1915 "	1,191	11.83	32,533	3.7	22.9	0.07	—
1919 (Aug. 31)	26,597	250.18	62,945	42.2	619.2	0.98	4.196
1920 (June 30)	24,298	228.33	68,434	35.5	1,020.3	1.49	4.225
1921 "	23,976	221.10	56,689	42.3	999.1	1.76	4.339
1925 "	20,516	177.82	70,051	29.3	881.8	1.26	4.105
1929 "	16,931	139.40	79,498	21.3	678.3	0.85	3.946
1930 (Dec. 31)	16,026	129.66	72,398	22.1	659.3	0.88	3.750
1933 (June 30)	22,539	179.21	44,713	50.4	689.4	1.54	3.350
1935 "	32,824 ^d	257.95	56,254	58.3	820.9	1.46	2.716
1940 "	48,496 ^d	367.73	73,900	65.6	1,040.9	1.41	2.514
1941 "	55,332 ^d	415.40	84,900	65.2	1,110.7	1.30	2.438
1942 "	76,991 ^d	571.72	108,100	71.2	1,260.1	1.17	2.260
1943 "	140,796 ^d	1,031.49	138,200	101.9	1,808.2	1.31	1.978
1944 "	202,626 ^d	1,467.23	156,400	129.6	2,609.0	1.67	1.925
1945 "	259,115 ^d	1,855.90	164,300	157.7	3,617.0	2.20	1.935
1946 (Feb. 28)	279,764 ^d	1,989.83	—	—	—	—	1.971
1946 (June 30)	269,898 ^d	1,914.35	157,300 ^e	171.6	4,722.0	3.00	1.995
1946 (Dec. 31)	259,487 ^d	1,832.25	—	—	—	—	2.056

^a From *Annual Reports of the Secretary of the Treasury, The Treasury Bulletin, and Daily Statement of the United States Treasury.*

^b For the years through 1849 these figures are computed from the figures for the gross debt and the population figures as given in the *Statistical Abstract of the United States*. For 1859 and later years they are from the sources cited in ^a.

^c For the years through 1938 these figures are from Robert F. Martin, *National Income in the United States, 1790-1938*, pp. 14-15, column headed "Current Income." The figures are for calendar years. Beginning with 1940 the figures are for the four quarters ending on June 30 of the years indicated; the figures are from the *Survey of Current Business*, April, 1944, p. 13, and February, 1946, p. 7, series entitled "National Income."

^d Including the guaranteed debt.

^e Partly estimated.

million dollars were repaid during the next six years and thereafter the debt was practically stationary until 1916.

Total borrowings of more than 25 billion dollars during World War I put the debt at a peak of 26,597 millions on August 31, 1919. Almost 40 per cent of the increase in the debt during that war was incurred for

the purpose of making loans to our Allies. In later years, payments on those loans, principal and interest, amounted to about $2\frac{3}{4}$ billion dollars,² of which about $1\frac{1}{2}$ billions were used to reduce the debt. For eleven years after 1919, debt repayments averaging almost 900 millions per year brought the debt to its postwar low of slightly more than 16 billions on December 31, 1930. From that date until 1940 the gross debt, including the guaranteed debt, increased by more than 32 billion dollars to a total of 48.5 billions.

The defense program and World War II were responsible for an increase of 231 billion dollars in the gross debt and raised the total to a record high of 279.8 billion dollars on February 28, 1946. Three policies during the recent war were responsible for large additions to the debt and each of them has contributed, or will contribute, considerable amounts to be used in retiring the debt. These policies were: (1) the Treasury practice of carrying a large cash balance; (2) the lend-lease program, and (3) large government investments in war equipment and stock piles. At its peak, the Treasury cash balance amounted to about 26 billion dollars, or more than the total amount borrowed during World War I. More than 22 billions of that balance have already been used for debt retirement. Gross lend-lease aid amounted to 50.7 billions; the net amount, after reverse lend-lease, was 42.9 billions. Up to September 30, 1946, cash payments received from lend-lease settlements amounted to more than a billion dollars and agreements have been concluded providing for the payment of another billion.³ Between June 30, 1940, and March 31, 1946, the proprietary interest of the United States in governmental corporations and credit agencies increased by 21.6 billions.⁴ As surplus supplies and equipments are sold, they should yield several billion dollars which can be applied to debt retirement.

Altogether, the three policies mentioned required more than 85 billion dollars. They have yielded or should yield around 30 billions to be used for debt retirement.

During the last ten months of 1946, the Treasury used most of its enormous cash balance to bring about a net reduction of more than 20 billions in the gross debt, leaving the total at the end of the year at 259.5 billions. This reduction was greater, by far, than all previous reductions in our history but it was, in a sense, fictitious since it came from an accumulated cash balance and occurred while the government was operating at a deficit on current account. It merely meant that the

² *Annual Report of the Secretary of the Treasury*, 1939, p. 513.

³ *The New York Times*, December 28, 1946, p. 1.

⁴ *Treasury Bulletin*, June, 1946, p. 69; *Annual Report of the Secretary of the Treasury*, 1940, p. 809.

Victory Loan of 1946 was unnecessary and that all the funds raised by that loan have been used for debt repayment.

A glance at the high points touched by the debt reveals an interesting comparison. The peak following the Civil War was more than twenty-two times as high as the peak after the War of 1812. After World War I the total debt was almost ten times the maximum Civil War debt and the largest total reached last year was a little more than ten times the peak amount reached in 1919.

Measures of the Gross Debt

One rough method of measuring the relative importance of the debt is to express it in per capita amounts. During the first decade of our national life, the per capita gross debt fluctuated around \$20. From that period until the Civil War it never exceeded \$15 and was usually well under \$10. At the high point following the Civil War the debt amounted to almost \$82 per capita, or approximately four times the previous peak. After 1865 both a declining debt and a rapidly growing population operated to produce a steadily and rapidly declining per capita debt; the low point of slightly less than \$12 was reached in 1915.

The peak debt in 1919 amounted to \$250 per capita, or just about three times the per capita debt in 1865. In eleven years this amount was almost cut in half, to slightly less than \$130 in 1930. After that date the figure increased steadily, passing the previous high point in 1935 and reaching \$368 in 1940. From 1940 to 1946, new high records were set almost every month and at the peak in February, 1946, the per capita debt was approximately \$1,990, or almost eight times the figure after World War I. During the past year the figure has been reduced about \$158, leaving a per capita gross debt at present of about \$1,832, or about ninety times as large as the one Alexander Hamilton worried about.

If the debt, or any substantial part of it, is to be repaid, its size in relation to the national income is important. The figures on national income before 1900 are sketchy and not altogether comparable with the figures for recent years but they do permit some rough comparisons. Before the Civil War the debt never exceeded 15 per cent of the annual national income and in most years it was well below 10 per cent. At its peak, the Civil War debt was probably about 40 per cent of national income (the figure was 37.3 per cent in 1869) but the figure dropped steadily until it fell below 4 per cent in 1915. Interestingly enough, the debt after World War I was also close to 40 per cent of national income (42.2 per cent at the peak) and this figure was reduced by exactly one-half at the low point in 1930. Thereafter, a drastic decline in income and a substantial increase in the debt changed the relationship sharply

and for the first time in our history the debt, in 1933, was equal to half of the annual national income. For the next seven years the debt increased somewhat more than income, and in 1940 the figure stood at 65.2 per cent. After 1940, income more than doubled but the debt increased much faster. Some time in 1943, debt surpassed income and at the present time, the debt is about 157 per cent of current income. In brief, the debt is today almost four times as large in relation to national income as it was at its two previous peaks following the Civil War and World War I.

Interest Rates and Interest Charges

An important aspect of a debt is the annual carrying charge it entails. A sovereign government has considerable leeway in repaying principal but if it is not to default it must make provision each year for the interest which falls due. When that interest cost is large, its payment may have considerable economic effect.

Interest payments on the federal debt have naturally fluctuated widely in keeping with the widely-varying debt. During the early years, interest was only about 3 million dollars per year but often constituted more than half of all ordinary expenditures. The largest annual interest cost before the Civil War was a little more than 7 millions, paid in 1816. In 1867, interest amounted to almost 144 millions or approximately 40 per cent of total expenditures that year. In the years around 1910 interest payments fell to about 22 million dollars, and were an insignificant part of the total budget. In 1923 interest on the debt amounted to 1,056 millions, or almost one third of total expenditures other than debt retirement. After declining to about 600 millions in 1932, interest costs have risen steadily to 4.7 billions in 1946 and an estimated 5 billions this year.

Over the long period, interest payments have not increased nearly as much as has the debt, due, of course, to a great decline in interest rates. In 1867 the average rate of interest paid on the interest-bearing debt was about 6.3 per cent.⁵ At the peak after World War I, that rate was about 4.3 per cent and today it is approximately 2 per cent. This represents a decline of a little over two-thirds in eighty years.

Despite this downward trend in the long run, interest rates have, up until the past fifteen years, behaved in such a way as to cause interest costs to fluctuate more than the size of the debt in the short run; that is, interest rates have been highest when the debt was large and lowest when it was small. During the Civil War the average interest rate on the debt rose by about one-fourth, from 5 per cent to 6.3 per cent, but

⁵ Computed by comparing the interest paid on the debt in the fiscal year 1867 to the average interest-bearing debt outstanding on June 30, 1866, and June 30, 1867.

by 1915 it had declined by about three-fifths to about 2.4 per cent. During World War I the effective rate increased by more than three-fourths, from 2.4 per cent to 4.3 per cent. The long standing of this pattern and its spectacular demonstration during World War I lend special emphasis to the remarkable reversal which has taken place during the past fifteen years. In that period, while the debt increased more than sixteenfold, the average rate of interest declined from 3.8 per cent in 1930 to 2.5 per cent in 1940 and to 1.9 per cent in 1944, or a total decline of 50 per cent.

Interest payments on the federal debt exceeded one-half of 1 per cent of national income in only a few years before the Civil War and in most years constituted a very small fraction of 1 per cent. At the end of the Civil War, such payments probably exceeded 2 per cent of the national income, but by 1910 the figure was less than one-tenth of 1 per cent. In 1920 the figure was about $1\frac{1}{2}$ per cent, but a sharp drop in income raised it to $1\frac{3}{4}$ per cent in 1921. After a decline to less than 1 per cent, the figure was back to $1\frac{1}{2}$ per cent in 1933. At our entry into World War II, it stood at about 1.3 per cent, and is approximately 3 per cent today. Thus in terms of the national income, interest payments on the debt are today about 50 per cent greater than in any previous period.

Purposes of Borrowing

Clearly the bulk of federal borrowing has been for war purposes, but there have been some significant debt operations for other purposes. The loan of 11 million dollars to finance the Louisiana Purchase increased the gross debt by about 15 per cent and was a major financial operation for its time. Sizable amounts were borrowed to fund current deficits in 1837-39, 1841-44, and 1856-60. Borrowings to cover operating deficits and to protect the gold supply in 1894-96 were larger than the amounts borrowed to finance the Spanish-American War in 1898-99. Total loans of 135 million dollars to finance construction of the Panama Canal in 1904-05 were the largest for any single nonwar project up to that time.

From 1930 to 1940, the gross debt increased by 32.5 billion dollars. Except for about 3 billions used to pay the veterans' bonus, all of that increase was incurred to finance a peacetime program. That 29 billions borrowed for nonwar purposes probably exceeded slightly all other new borrowing up to that time. Thus at the beginning of the defense program in 1940, for the only period in our history, our total borrowing for nonwar purposes had exceeded our borrowing for war purposes.

Debt developments between 1930 and 1940 were of unusual significance. For the first two and a half years there was, as there had

often been before, an increase in the debt to cover current deficits caused mainly by a decline in revenues; such increases as there had been in expenditures were largely unplanned and involuntary. But in the latter part of 1933 the federal government began a program of large, planned, new expenditures to be financed principally from borrowing in an effort to accomplish economic recovery. Whether or not this program was a success, a precedent was established and the chances are that it will be followed if and when the country experiences another substantial depression. Thus a second major purpose for borrowing was recognized which, in the years ahead, may rival war as a cause of increases in the debt.

Patterns of Debt Retirement

During the past year we have retired a considerable amount of debt. Presumably in the years immediately ahead thought will be given to further reductions. If we are to have a period of debt retirement it may be instructive to look back to three other periods in our history when the debt was being reduced and note some of the characteristics of such periods. In the past, the United States has had the unique distinction of being the only major power in the world which adhered to the policy of retiring its public debt. How was that reputation acquired?

There have been three important periods of debt reduction in the United States beginning, respectively, in 1815, 1865, and 1919.

After 1815, large surpluses resulting from war taxes were applied to reduce the debt and in four years the total was reduced by 30 per cent. A sinking fund was set up which called for annual appropriations of 10 million dollars plus any surplus above 2 millions in the Treasury. The war taxes were soon repealed and the financial difficulties of 1819-21 sharply reduced revenues. As a result there was no net reduction in the debt from 1820 through 1824. But after 1824 revenues increased appreciably and within ten years the entire debt of 90 millions was repaid.

During the period of rapid retirement, the revenues of the federal government came almost exclusively from customs and the sale of public lands. The rates which produced those revenues were not set primarily for the purpose of yielding revenue. In the one case they were set to provide protection; in the other, to facilitate land settlement. After 1824, those two sources automatically produced a swelling tide of revenue as the country enjoyed its first big boom which was fed in part by a rapidly increasing total of state borrowing. Neither tariff rates nor the price of public land could be changed without affecting major nonrevenue objectives. Moreover, Jacksonian principles would not permit the federal government to embark upon new projects to spend

more money. So the surplus continued to mount and the debt melted away.

It may be said that during the first period of debt retirement—and the only one in which the debt was completely repaid—the task was accomplished almost without effort. The debt was washed away, more or less incidentally, by the flood of surplus funds which resulted from our tariff policy, our public land policy, the boom of the 1830's and a philosophy of limited federal activities. Further evidence to support this viewpoint is provided by the fact that after the debt had been eliminated, revenues continued to mount and the surplus continued to pile up until it became a major problem. Our first and most spectacular debt retirement was to a considerable extent fortuitous.

After 1865 war taxes were repealed more slowly than after 1815, while expenses were cut more rapidly. For twelve years expenditures were pushed down vigorously until they amounted to only one-fifth of the wartime peak. Then they were held there for another twelve years. The surpluses thus produced made possible a great reduction in the debt. By 1873 the peak debt had been reduced by 24 per cent. A sinking fund was established which provided for the retirement of 1 per cent of the debt each year, plus interest on the bonds retired, but it was handled quite informally. In 1911 the Secretary of the Treasury stated, "the sinking fund law has been not exactly a dead letter, but a dead-and-alive letter for nearly forty years."⁶

From 1873 to 1881 there was little reduction in the debt because of disturbed economic conditions during the 1870's and the difficulties attendant upon the resumption of specie payments in 1879. But in the ten years after 1881 the debt was practically cut in half—reduced by approximately 1 billion dollars. Expenditures were at the lowest point since 1865 while customs and internal excises on liquors and tobacco yielded increasing amounts of revenue, due largely to a steadily increasing population. The rates on the tariff and liquors were determined largely by nonrevenue considerations. In 1883, several minor taxes were repealed and the rates on tobacco were cut in half. In 1890 there was another reduction of 25 per cent on most tobacco products.⁷ But the surpluses continued until 1893.

At several times, particularly after 1887, the Treasury had difficulty in using the large surpluses to reduce the debt, and on several occasions had to go into the open market and bid for bonds, some times paying substantial premiums. In the four years 1887-91 total premiums of over 56 million dollars were paid to retire 360 millions of bonds.⁸ If it

⁶ Quoted in Henry G. Hendricks, *The Federal Debt, 1919-30*, p. 209.

⁷ Davis R. Dewey, *Financial History of the United States* (12th ed.), p. 420.

⁸ Harvey E. Fisk, *Our Public Debt*, p. 45.

had not been for these complications it is quite probable that the debt would have been reduced more than it was. Debt reduction in this period finally came to an end in 1893 after the Civil War debt had been reduced by about 66 per cent of its peak.

In the years immediately after 1865, when the debt was being refunded and interest rates reduced, debt reduction was undoubtedly a major consideration shaping the Treasury's fiscal policies. But in the 1880's, when the revenues continued to roll in despite tax reductions, the goal of debt repayment lost much of its importance. In fact, surplus revenues became a major problem again, and as one method of spending them, military pensions were extensively liberalized in 1890. To a considerable extent the debt reduction of the 1880's was automatic or passive in the sense that it occurred without any positive action to raise funds for debt retirement and despite substantial tax reductions.

The debt reduction which began in 1919 was the only one which has been carried out under modern conditions in which progressive income taxes provide the bulk of revenues. In World War I the highest tax rates were levied by the Revenue Act of 1918 which did not become law until February, 1919—three months after the fighting stopped. It remained in effect through 1921. In the meantime, expenditures other than debt retirement were cut quickly and deeply until they were only about one-sixth of the wartime peak. Then they were held at that level until 1930. Surplus revenues and other funds were sufficient to cut the debt by 10 per cent in the first two years. A sinking fund was set up designed to retire the whole debt in twenty-five years and, in addition, certain minor revenues were earmarked for debt retirement.

For eleven years after 1919 the debt was reduced steadily and rapidly. The total reduction was about 40 per cent of the 1919 peak. From June 30, 1919, to June 30, 1930, there was a net reduction of 9,299 million dollars in the gross debt. The funds for this reduction came from the following sources:

	<i>Millions*</i>
Surplus receipts	\$3,460
Cumulative sinking fund	3,187
Payments from foreign governments	1,489
Reduction in General Fund balance	933
Miscellaneous	230
Total	\$9,299

The rate of debt reduction was considerably greater than the rate realized after 1865 and about equal to, though more regular than, the rate after 1815. After 1930 revenues dropped sharply, expenditures rose appreciably, and debt reduction came to an end.

* *Annual Report of the Secretary of the Treasury*, 1932, p. 53.

After 1921, debt reduction was accomplished in a period of relatively stable commodity prices, a period of sustained population growth, a period of depression in agriculture, a period of pronounced prosperity for commerce and industry, and a period of boom for real estate and common stocks. Also, during these years, state and local debts were increasing by about the same amounts as the federal debt was being reduced, so that the total public debt was remaining constant or increasing slightly.¹⁰

In 1921 many of the war taxes were repealed and the rates on practically all others were reduced. There were further substantial tax reductions in 1924, 1926, and 1928. For example, the exemption of a married couple under the income tax was increased from \$2,000 to \$3,500, normal rates were reduced from 6 and 12 per cent to a range from 1½ to 5 per cent, and the top rate on the surtax was lowered from 65 to 20 per cent. Despite those reductions and because of the leverage of a system of progressive income taxes in a period of high income, annual revenues remained remarkably stable around 4 billion dollars from 1922 to 1930. At the same time expenditures other than debt retirement remained equally stable around 3 billions, leaving a large margin for debt repayment.

In summary, this period of debt reduction was made possible by: (1) a negative policy of delaying tax reduction; (2) a positive program of reducing federal expenditures rapidly; (3) a continued growth of population; and (4) a period of commercial, industrial, and financial prosperity which produced large tax revenues.

In conclusion, it is appropriate to compare these three periods of debt reduction which have been examined and see what features, if any, they had in common. First, in each instance there was a sharp reduction of the debt in the early years, the amount of the reduction being from 25 to 40 per cent of the peak debt. Those repayments were made possible by large revenues from war taxes which were repealed or reduced only slowly and by the rapid reduction of expenditures.

Second, in two of the three periods, the early years of rapid reduction were followed by a lull of five or six years, after which debt reduction was resumed. In one of these cases the debt was entirely repaid while in the other it was reduced to about 34 per cent of the peak. It was the reduction accomplished during the second phase of these two periods which attracted most attention and established the reputation of the United States for debt repayment. In the third period of debt reduction there was no second phase; after the initial years the debt increased steadily until another war set a new peak debt.

¹⁰ Donald C. Horton, *Long-Term Debts in the United States* (Washington: U. S. Department of Commerce, Domestic Commerce Series, No. 96, 1937), pp. 32, 171.

Third, in each period debt reduction was made possible by a policy of vigorous reduction of expenditures from the wartime levels and by a policy of keeping expenditures down. Debt reduction stopped when expenditures rose substantially.

Fourth, there were no instances in which new taxes were levied or the rates of old taxes were raised for the purpose of retiring the debt. Rather, all major reductions came in periods of declining tax rates. Generally, the debt has been reduced by increased revenues which came from increasing population and expanding national income. Except in the immediate postwar years, any sharp decline in revenues put an end to debt reduction.

Fifth, sinking funds were used in each period but they were not of the formal, rigid type. Sinking-fund requirements were not carefully observed and it is doubtful whether they facilitated debt retirement.

Sixth, in two of the three periods reductions in the federal debt were offset in part or in whole by increases in state and local government debt.

Finally, it may be concluded generally that the principal causes of increases in the debt have been war and, since 1930, deficit financing in time of peace. On the other hand, debt reduction has largely been a function of increases in the total national income. That income has increased both because of an increasing population and because of increasing productivity per capita. It is generally agreed that population growth will soon disappear and income will then increase only in response to increasing productivity. At the same time, deficit financing is likely to increase in importance as a cause of increasing debts. The principal causes of debt increase have been doubled in number; the principal factors of debt reduction will shortly have been cut in half.

HISTORY OF PUBLIC DEBT IN LATIN AMERICA

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Sixty years ago Henry C. Adams remarked in his classic work on public debts that "it requires but a slight study of modern public debts to perceive that an explanation of their origin and development cannot be the same for all people,"¹ and that remark still holds true. Latin America is not a political or economic entity. Yet as one surveys the history of the public debt in Latin America, it is surprising how much most of those countries have in common in their public debt history, and how much one can generalize with reasonable accuracy. The most striking contrasts are not those among the various Latin-American countries, but as between the public debt experience common to most of the Latin-American countries, and that of the United States and Western Europe.

Despite great economic differences among the Latin-American countries, most of them through long periods of their history have had a common feature of their national life that goes far to explain their public debt history. This common feature has been a distrust of government by the propertied classes within the country and a general custom of using their wealth either for the development of their landed estates or for luxurious living, frequently in European capitals. No Latin-American country in its early history had an Alexander Hamilton to advance the idea that a national debt could be a national blessing, and to encourage its ownership by the propertied classes as a means of winning their support to a strong and stable national government. Henry C. Adams has said that under modern constitutionalism "when property owners lend to the government, they lend to a corporation controlled by themselves. . . . Our modern political society is properly characterized as commercial constitutionalism, and out of this fact arises such guarantee as exists that moneys borrowed by governments will be repaid."² Until very recently few countries in Latin America have had for any extended period commercial constitutionalism of the type described by Adams as a prerequisite for borrowing by a government from its own people.

The four most striking features of the public debt history of Latin America have been:

1. The almost complete absence of a marketable internal debt. Most of the internal debt has been government paper money, bonds issued

¹ *Public Debts* (New York, 1887), p. 6.

² *Ibid.*, p. 9.

to fund unpaid claims, or loans that were practically forced upon the commercial banks, and in more recent years upon the central banks.

2. The foreign ownership, with the exception of some recent developments in Argentina, of a very large part—in some countries practically all—of the long-term public debt bought voluntarily by investors.

3. The importance of the promoter and the loan contractor in the marketing of public debt abroad. The foreign ownership of the public debt of the Latin-American countries cannot be explained primarily as the result of an automatic flow of funds from low interest rate countries to high interest rate countries, or in any other impersonal terms that conceive of a self-adjusting international loan fund. A large part of the long-term foreign borrowing of the Latin-American republics can be interpreted only in terms of personalities. These include in the borrowing countries not only the presidents and ministers of finance but frequently private parties who "cut in on the loan" in one form or other, running all the way from outright graft to a legitimate desire to further railroad construction or other internal improvements. Account must be taken on the lending end, not only of the role of the great international bankers like the Rothschilds, the Barings, and the House of Morgan, but particularly of the activities of more aggressive bankers less inhibited by traditions of sound finance, and of the swarms of promoters, go-betweens, and people who knew "the right people." It is the activities of these latter groups rather than interest rate differentials that explain so many bizarre episodes in British lending to Latin America in the 1820's and around 1870, and in our own Latin-American lending after 1920. The statement of the British Parliamentary Committee of 1875 on loans to foreign states, "Your Committee have been much impressed, in the course of their inquiry, with the great importance of the functions exercised by the agent or contractor for a foreign loan,"³ is also applicable to loan operations in the 1820's and in the 1920's.

4. A very large part of the foreign-held public debt of Latin America has been created, at least ostensibly, for public works. I say ostensibly, because the importance that bond prospectuses put on the productive use of loans may be largely specious. But even after making generous allowances for the diversion of public revenues to other purposes when loan funds were available for public works, and after recognizing bad management and some plain dishonesty here and there, the fact still stands that the percentage of the public debt of Latin America that was created for public works was much greater than was the case in the United States and in the countries of Western Europe, where a large part of the existing public debt originated in war expenditures.

³ *Report from the Select Committee on Loans to Foreign States* (Ordered, the House of Commons, to be Printed, 29 July 1875).

II

The foreign-held public debt of the Latin-American countries originated largely in four periods, and the loan operations in these periods are sufficiently well defined to permit the following breakdown:

1. The loans of the 1820's to the new countries that had arisen after the revolts against Spain, and to an independent Brazil.
2. The loans of the 1860's and early 1870's largely for speculative railroad developments, and many to financially unstable countries.
3. The loans from the 1880's to the first World War, largely for public works in the more stable countries.
4. The loans of the 1920's, in large part nominally for public works. Up to 1920's almost all Latin-American government loans, except to Cuba and Mexico, had been sold in Great Britain and France, but practically all of the loans of the 1920's were placed in the United States.

In the 1820's Brazil, and at least six of the republics formed out of the Spanish possessions in the New World, sold bond issues in London. With the breakup of the Republic of New Granada into Colombia, Venezuela, and Ecuador, and the dissolution of the Central American Federation into five republics, a total of at least thirteen countries started with a public debt that was contracted under circumstances that did not augur well for the stability of the public credit of the new countries of Latin America. Only a combination of a political interest of Great Britain in the new countries of Latin America, a speculation-mad investing public in Great Britain, a group of loan contractors whose profits were an important motivation in the transactions, and finally Latin-American ministers of finance who seemed willing to agree to any terms, no matter how outrageous, as long as they brought in current funds to a hard pressed exchequer, can explain the transactions of the 1820's. In the light of the history of these early loans, the comment of Manuel Zozaya, a representative of Mexico who was sent to the United States in this period with the mission of raising a loan here, is worth quoting. He was unsuccessful in this mission, but possibly with the wisdom that came from a detached observation of the terms of the successful loan negotiations in England, he reported to his government, "if it can be said that I have done my country any service on this mission, that service can consist only in my having done nothing, at least so far as the foreign loan is concerned."⁴ Before the end of the

⁴ Quoted in E. J. Turlington, *Mexico and Her Foreign Creditors* (New York, 1930), p. 24.

1820's every borrower but Brazil and Chile had defaulted, and Chile defaulted in 1841.

These defaults go far to explain the small amount of foreign borrowing by the Latin-American countries between the 1820's and the 1860's. In the 1860's and early 1870's a large amount of new British money and some French money was loaned to Latin-American governments, principally for public works, and in several cases in connection with adjustments of outstanding defaults.⁵ A number of these new loans went into default shortly, and the parliamentary investigation of 1875 revealed a tale of speculation, of excessive commissions to promoters, and mismanagement by the officials of the borrowing government, that not only makes clear why so many loans went into default, but also suggests why citizens and officials of some of the borrowing countries felt no great responsibility for resuming service on the debts.

The new defaults, plus the financial depression of the 1870's, led to a sharp decline for a time in foreign borrowing by Latin-American countries, but in the 1880's there was a great increase in foreign borrowing, particularly by the politically more stable countries. This increase of government loans, which accompanied a large amount of foreign investment in private projects in the borrowing countries, was associated both with favorable financial conditions in the London money market and with the establishment of stable political regimes in several countries, notably Argentina and Mexico, and the desire of the Latin-American countries to build railroads. Argentina, Brazil, Chile, Uruguay, Peru, and Mexico borrowed large sums in the London market, and far more than with the loans of the 1820's and the 1860's and the early 1870's this borrowing was used for productive purposes.

British purchase of Latin-American government bonds continued down to 1914, though never on the scale of the 1880's; French and German investors acquired the public debt of several countries; and the United States made large investment in Mexican and Cuban bonds. Argentina and Uruguay were forced to temporarily suspend payments in the 1890's, but worked out an adjustment accepted by the bondholders. Several other countries, in particular the northwest coast countries and the republics of Central America, either continued in default on obligations of long standing or went into new defaults in the difficult years of the 1890's.

The foreign public debt situation of the Latin-American republics at the end of the first World War was quite different from that of a decade earlier. Mexico's political upheavals and wholesale default of her public

⁵ L. H. Jenks, *The Migration of British Capital to 1875* (New York, 1927), pp. 421-422, lists the foreign government loans floated in London in the period 1860-76.

debt had removed her for the time from the international loan market. The European loan market, and, after our entrance into the war in 1917, the New York loan market, was practically closed to Latin-American countries. During the war amortization payments, and some repatriation, had reduced the foreign-held public debt of most of the Latin-American countries. After the war British and other European investors made few new purchases of Latin-American public debt, but American investors more than filled the breach. Sales here in the 1920's of Latin-American government bonds were close to 2 billion dollars. Seven of the ten South American republics, the three West Indian republics, and four out of the six Central American republics sold bonds in the American market. The history of some of these loans, as brought out in the investigations of the Johnson Committee of the United States Senate,⁶ and the similarity to the story of British loans in the 1820's, and in the 1860's and 1870's, provides bountiful evidence in support of the general thesis that history repeats itself, but little in support of the proposition that investors learn anything from history.

Argentina was the only national government of the fourteen Latin-American countries borrowing here in the 1920's that maintained full payment, both interest and sinking funds, throughout the depression, although three other countries⁷ met all contractual interest payments, either when due or later. Seven countries⁸ worked out settlements, involving a scaling down of interest, that has been accepted, although very reluctantly in some cases, by the great majority of the bondholders. Three countries⁹ are making no payments on their defaulted securities, and in addition a large part of the Mexican debt, on which payments were suspended in 1913, is still in default. The debts contracted before the 1920's, and held largely in Great Britain, also went into default in the 1930's, and their subsequent history is essentially the same as that of the debts of the 1920's.

III

It is a mistake to regard the Latin-American public debt operations of the 1920's in the New York market and the defaults of the 1930's as representing something peculiar to the bonds of Latin-American governments. It should rather be considered as part of the financial history

⁶ "Sale of Foreign Bonds or Securities in the United States," *Hearings before the Committee on Finance, United States Senate, 72nd Cong., 1st Sess., Pursuant to S. Res. 19 (Washington, 1931, 1932).*

⁷ Dominican Republic, Guatemala and Haiti. The information on the present status of the dollar loans of the 1920's is taken from *Report 1941 Through 1945* and *Annual Report 1945* of Foreign Bondholders Protective Council, Inc.

⁸ Brazil, Chile, Colombia, Cuba, El Salvador, Panama, and Uruguay.

⁹ Bolivia, Costa Rica, and Peru.

of the incredible twenties, and of the great depression. There are, however, two features in connection with the history of Latin-American public defaults, both in the 1930's and in early periods, that are of some special significance.

With the exception of Soviet default after 1917 and the defaults by Nazi Germany after 1933, there has never been such a wholesale default on public debt as took place in Latin America in the 1930's. The Soviet and German defaults had their primary basis in a political attitude, in the Soviet case toward all capitalists, in the German case toward all foreigners, whereas the Latin-American defaults, outside of Mexico, had their basis primarily in economic conditions. This is not to say that some Latin-American countries could not have made more payments than they did in the 1930's, or that they could not have made settlements more favorable from the bondholders' point of view, had they been willing to put greater pressure on their living standards. But the fundamental background against which this default history took place was that the marketable public debt was almost all held abroad, and that the maintenance of full payments with the depression conditions of the 1930's would have involved a crushing burden on the economies of a number of Latin-American countries—a burden far greater than would have been the case had the bonds been held domestically, and the income on them subject to local taxation, and the income ex-taxes been available for domestic expenditures or reinvestment. This situation was undoubtedly complicated by an understandable decrease in the will to pay when the creditors were foreigners. It seems evident, however, that even if the will to pay had been equally great as regards foreign and domestic creditors of Latin-American governments, there were institutional features of the public debt situation of Latin-American countries that go far to explain the almost unparalleled record of default in the 1930's on the foreign-held public debt.

Another significant feature of the public debt history of Latin-America is that a large proportion of it, after the initial loans of the 1820's, was incurred, as indicated earlier, for developmental public works. The history of developmental transportation (as distinguished from transportation in Great Britain, Western Europe, and the Atlantic Seaboard in this country) is that it has rarely been profitable in the narrow commercial sense of giving to those who first put up the money the "going rate of return" on investment capital. The history of railroad development in this country west of the Alleghenies, in western Canada, in Australia, and in a large part of Latin America outside of Cuba, and the seaboard areas of Argentina and Brazil, is that their construction was possible only through government subsidy, direct

or indirect, or the creation of an illusion in the minds of private investors (as a result of a combination of a speculative atmosphere, an abundance of funds seeking investment, and the persuasive appeals of promoters) that the profit possibilities of the railroads were far greater than the facts would warrant.

The decision whether the risk of these developmental public works is carried by private capital or by the government is, to a greater extent than economists generally have realized, the result of historical accident. In the 1830's a number of American states, particularly Pennsylvania, Maryland, and the southern and western states, borrowed large sums for canal and railroad construction.¹⁰ The public credit aftermath of these governmental activities in behalf of transportation was in effect a preview of the subsequent history of similar public debt operations in Latin America. By the 1840's nine states were in default.¹¹ Three of these defaulters¹² subsequently resumed payments in full, although not before British bondholders had said some harsh words; two states¹³ made adjustments that scaled down the bondholders' interest; and four states¹⁴ simply repudiated their bonds.

This disastrous experience of American states in financing internal improvements strengthened the belief in the United States that railroad construction should be handled by private capital—a policy that it was much easier to carry through because a great public domain was available for grants to railroad corporations. Railroad construction after the Civil War, with the exception of a few operations under reconstruction governments in the Southern States, was almost all handled in a way that did not involve public credit. Foreign investors and investors from the eastern seaboard lost heavily from their financing of railroad construction in the post-Civil War period, but without any default on the public debt, except in a few of the Southern States.

From the point of view of public credit, the American procedure in the post-Civil War period was far better than our pre-Civil War procedure, or the procedure that was followed in large part in Latin-American railroad development. A bankruptcy of a private railroad does not have the serious effects upon the attitude of foreign investors toward a country that the default by a government has, even though the losses may be the same in both instances. It was our good fortune that most of the foreign capital for our developmental public works did

¹⁰ This information in regard to the debts of American states is based largely on R. C. McGrane, *Foreign Bondholders and American State Debts* (New York, 1935), Chs. IV-XII.

¹¹ Arkansas, Florida, Maryland, Illinois, Indiana, Louisiana, Michigan, Mississippi, and Pennsylvania.

¹² Illinois, Maryland, and Pennsylvania.

¹³ Indiana and Louisiana.

¹⁴ Arkansas, Florida, Michigan, and Mississippi.

not come in through public credit, whereas in Latin America most of the financial penalties for misguided planning, exuberant enthusiasm, business depression, and plain graft in connection with developmental public works have come to plague the governments. Conjectural history has limited uses and should be resorted to sparingly, but it might be worth while for the economic historian to speculate as to the public debt history of a number of our states in the 1890's, and again in the 1930's, had all of the obligations of the railroads that went into receivership, or failed to give a "fair return" to the investor, been contractual obligations of the states through which the railroads ran. Much of the difference between the bad public debt record of so many Latin-American countries and the good record, since reconstruction days, of American state governments involves a far more subtle interpretation than a contrast between the good government and financial responsibility of Anglo-Saxon peoples and the supposed deficiencies of Latin-American peoples in the field of political stability and commercial morality.

IV

Public debt operations in Latin America since 1931 have been limited largely to the internal field, and to negotiations in connection with readjustment on the outstanding external debt and to its repatriation. New foreign loans have been negligible except for those extended by the Export-Import Bank.

Three points stand out particularly in this period. The first is the speed with which readjustment of defaults has been worked out, in contrast with the long drawn out defaults that followed most of the suspensions of payment in the nineteenth century. The second is the repatriation of substantial amounts of foreign-held public debt. This repatriation has gone to the furthest extent in Argentina, where the last of the outstanding dollar bonds were called for redemption November 15, 1946,¹⁵ leaving only a sterling debt that is more than covered by Argentine-held sterling balances. Other countries, in particular Chile, Colombia, Uruguay, and Brazil, have repatriated substantial amounts of foreign-held public debt, some through private purchase but to a larger extent by purchases in the open market by the debtor governments. The third point is the development, at least in embryonic form, of a domestic market for government securities in a number of countries, although Argentina would appear to be the only country where the market as yet has any substantial basis outside of more or less compulsory purchases by banks and individuals.

The public debt picture in Latin America in the 1950's will probably

¹⁵ *New York Times*, November 17, 1946 (III, 1).

be substantially different from what it was before 1930. Even after the readjustments on the outstanding bonds have been worked out, it is unlikely that American investors will be buyers of Latin-American public debt on the scale that they were in the 1920's, or that British investors were in an earlier era. As a result of Export-Import Bank loans of the last six years to Latin America at $3\frac{1}{2}$ per cent and 4 per cent, Latin-American countries are thinking in terms of an interest rate that probably will not interest American investors, even when memories of the 1930 defaults have become dim. Latin-American public debt operations, in the American market, except for refunding, are likely to be largely through the International Bank for Reconstruction and Development. The development of industry in Latin America and of a wealthy class with what one might call a commercial and financial scale of values, support the idea that at least in the more advanced countries of Latin America there will be a far larger proportion of public debt operations in the domestic market. The public debt picture of the Latin-American countries is likely to look less like their public debt picture before 1930 and more like the public debt situation in the United States and Western Europe in the half century before the first World War.

DISCUSSION

LUCIUS WILMERDING, JR.: From these three extremely interesting papers a very simple fact—I cannot call it a principle—emerges: that when income exceeds outgo the public debt goes down (or the Treasury balances up) and that when outgo exceeds income, vice versa. Now I conclude from this that the size of any public debt reflects, in some measure at least, the skill with which in the past the two elements, income and outgo, have been managed and related. I think therefore that an examination of the financial machinery by which governments seek to control receipts and expenditures and perchance to bring the two into balance has a very distinct bearing on the public debt.

I want in these remarks to show how in the United States this machinery has tended to disintegrate; and, like Dr. Ratchford, I shall begin in 1789 with the appointment of Alexander Hamilton as Secretary of the Treasury.

Hamilton, as everyone knows, ran everything. For several years all financial matters were in the first instance referred by Congress, not to one of its own committees, but to Hamilton. So much was this the case that when Madison turned against Hamilton and sought to force his resignation, the mode chosen was an attempt to prevent a reference. "He well knew," wrote Hamilton to Colonel Carrington, "that, if he had prevailed, a certain consequence was my resignation." Hamilton, upon a subject being referred to him—sometimes even on his own initiative (for he was authorized by the act establishing the Treasury Department to prepare plans unasked)—would get up a plan, report it with a wealth of supporting arguments, and then push it through both Houses. Senator Maclay's diary gives a picture, somewhat biased to be sure, of the mode. A prominent antifederalist summed up the situation in April, 1792: "I have long remarked in this House, that the Executive, or rather the Treasury Department, was really *the efficient Legislature of the country*, so far as relates to the revenue, which is the vital principle of government."

Even before Hamilton left the Treasury the system began to change. Towards the end of March, 1794, a committee of the House of Representatives was appointed to provide funds for equipping the fleet and other measures connected with the exigencies of the times; this committee sat daily and was no doubt greatly influenced, perhaps dominated, by the Secretary of the Treasury. But what is to be noticed is that the responsibility for financial planning was taken from the Treasury Department and given to a Congressional committee.

When Hamilton was gone from the Treasury and Gallatin had arrived in Congress, the new system was regularized. One of Gallatin's first acts was to move the appointment of a committee of ways and means, which was to report on the state of the public debt, revenues, and expenditures, and to which was to be referred all reports from the Treasury Department and all propositions relating to revenue. In the state of political parties which then obtained, the effect of this innovation was to put the Treasury Depart-

ment "in commission"—to make the efficient Secretary of the Treasury a board of fourteen members and to reduce the nominal Secretary to what Fisher Ames called "a head clerk." Still, the system was workable enough; granted a committee not hostile to the Executive and a strong Secretary of the Treasury, it might even be productive of some good. When Gallatin became Secretary of the Treasury he directed the financial planning of the country in much the same manner as Hamilton; it was even noticed that during his tenure of office the practice of making references directly to him, without the intervention of a committee, was revived.

So much for the system during the earliest years of our government. I want now to come down to the twenty years immediately following the Civil War and to show how the jurisdiction of the Committee of Ways and Means—which previously had extended over the whole of the financial legislation of the country, appropriation bills as well as revenue bills—was broken up and subdivided among a host of committees, most of them working at cross purposes. I have recounted the process in my book called *The Spending Power* (page 143), and I hope you will excuse my reading the passage as it stands rather than as I might have rewritten it especially for this occasion:

In 1865 the functions of the Committee on Ways and Means were divided and jurisdiction over the appropriation bills was transferred to the newly created Committee on Appropriations. This in itself may have been a mistake, but worse was to follow. In 1876 a change was made in one of the rules of the House by which any general legislation germane to a bill might be in order if it retrenched expenditures. The rule as presently construed resulted in putting a great mass of legislation upon the appropriation bills and in so overloading the committee in charge of them as to render it impossible for its members to devote sufficient attention to the details of the appropriations proper. The consequence was as foreseen by Garfield: the rule broke down the Committee on Appropriations and dispersed the annual bills to several committees, so that the legislation on that subject was not managed by any one committee nor in accordance with any general or comprehensive plan. In 1880 the Committee lost control of the Agriculture Appropriation bill; and in 1885 Congress deprived it of jurisdiction over the appropriation bills relative to the Army, the Navy, Indian Affairs, Foreign Affairs, and Rivers and Harbors. Thus it came about that instead of one road into the Treasury—and that a thorny one—there were seven or eight primrose paths and "as many byroads as there were members of these appropriations committees." The predictions of Representative Randall came true: the distribution of the bills led to continually increasing appropriations and made it more and more difficult to keep expenditures within the limits of receipts; the grasp which the Committee on Appropriations alone could keep upon the purse strings was relaxed; the spending committees, having intimate and for the most part cordial relations each with a particular department, launched out into an unrestrained competition for appropriations, the one striving to surpass the other in securing greater recognition and more money for its special charge. In these circumstances it is not surprising that executive dereliction passed almost unnoticed and that the department heads and bureau chiefs came to look upon themselves rather than upon Congress as the ultimate arbiters of expenditure. To make confusion worse confounded, requests for deficiency appropriations were referred not to the committee which had passed upon the original estimates but to the Committee on Appropriations.

The Executive at this time was in no better case. If the grasp of Congress on the purse strings was relaxed, so too was that of the Secretary of the Treasury. The latter was still interested in the revenue side of the budget, but, so far as expenditures were concerned, he was a financial channel rather than a finance minister. A mere editor without discretion, he compiled the

departmental estimates and transmitted them to Congress in a document for which he assumed no substantive responsibility and over which he had no control, otherwise than as he might reduce or increase the estimates of his own department.

So extreme a disintegration could not fail to attract the attention of reformers both in and out of Congress. During the second decade of the present century a determined effort was made to correct the errors. I might mention in particular the work of President Taft's Committee on Economy and Efficiency and of the House and Senate Budget Committees during Wilson's administration. Finally, this effort bore fruit. In 1920 the House Appropriations Committee was reintegrated, so that today there is only one committee; in 1921 the Budget Bureau was created to control, on behalf of the Executive, the departmental estimates of expenditures; and in 1922 the Senate Appropriations Committee (whose history had paralleled that of the House Appropriations Committee) regained its original jurisdiction.

But the reintegration has been more apparent than real. Pass over the fact that the revenue and appropriations committees remain distinct, and look for a moment at the recent history of the House Appropriations Committee. It has been broken down into subcommittees between which curtains have been dropped fully as impenetrable as those which formerly divided the separate committees. The testimony of members of Congress before the La Follette-Monroney Committee is very instructive on this point. From it we learn that at the hearings of a subcommittee the estimates are gone through with a fine-tooth comb; but we learn also that these hearings are secret and not open even to the other members of the appropriations committee. After the subcommittee is through, the full committee is called together to spend an hour or so in a process known as "marking up the bill"; then the bill is reported to the House. All this is done in secret. Next, a day is set to commence debate in the House. But no member, excepting those few who served on the subcommittee, is really qualified to speak in the debate; for the hearings are not available to the general membership of the House or to the public, in most instances, until the bill reaches the floor. Here is what Representative Michener says about the process:

No one in the House has any knowledge, and the public has no knowledge, as to the reasons given by the department for the justification of the items contained in the bill. I have in mind—and I think it was the agricultural bill this year—where there were 2,200 pages of testimony given in hearings. When the House commenced consideration, the House was presented with this document consisting of 2,200 pages, plus a long bill which it had never had an opportunity to see, much less study, and the House proceeded for a couple of days until the final vote. It is just impossible for the general membership of the House to know much about the hearings.

When the House passes the bill it goes to the Senate, which, having no time to consider it, passes it with a few amendments. The bill then goes to a conference committee where the differences are reconciled and the whole business concluded.

In all this the point to bear in mind is that the appropriations are made piecemeal; that no one gets a view of the whole; and particularly that no

one gets a view of the relation between estimated revenue and estimated expenditure.

On the side of the Executive the reform has doubtless been more effective. The Budget Bureau exercises a considerable control over the departmental estimates. But the separation of responsibility for revenue and expenditure has remained. The Treasury Department is charged with the raising of money and the Budget Bureau with controlling its expenditure; but the two offices have always been separate and distinct. This is a fact worth remarking, for it has often been misunderstood. When the Bureau was first set up, there was a dispute between the two houses of Congress as to its proper location. The Senate wished to place it under the Secretary of the Treasury; the House under the President. In the end a compromise was agreed on of a type dear to the legislative heart but to no other; the Budget Bureau was placed physically in the Treasury Department but was made directly responsible to the President; as Representative Good remarked at the time, no power at all was granted to the Secretary of the Treasury. In 1939 the realities of the situation were recognized and the Bureau was transferred to the Executive Office of the President.

Recent months have seen the beginnings of a movement towards re-integration. Rumors are current—how well founded, I know not—that the Budget Bureau may be placed in the Treasury Department. And in Congress provision has actually been made for the creation of a Budget Committee to consider the President's financial recommendations. This committee consists of the Ways and Means Committee and the Appropriations Committee of the House and the Finance Committee and the Appropriations Committee of the Senate, meeting jointly. It is to report to Congress by February 15 a legislative budget for the next fiscal year, including the estimated over-all receipts and expenditures for that year; if estimated receipts exceed estimated expenditures it will recommend a reduction in the public debt, and if the contrary is the case, it will recommend an increase in the public debt by an amount equal to the estimated difference.

What practical consequences the new mode will have, I shall not venture to predict. The conclusions to which my own studies have led me are that no substantial improvement is to be expected until the Secretary of the Treasury becomes once more what he was in the time of Hamilton and Gallatin, a real finance minister, and until the House and Senate, respectively, bring their machinery to a point where they are able to deliberate with real intelligence on the financial plans which the Treasury Department may propose. Revenue and expenditure must be looked at together and managed together. So at least we must say, if we put any stock in the maxim attributed to Lord Welby, that those who are charged with maintaining a certain head of water in the reservoir should have some control over the outflow of the sluices. To control the size of the public debt is to control the relationship between revenue and expenditure.

CHARLES C. ABBOTT: We have heard three very interesting and illuminating papers. This session of the American Economic Association will devote much

time to public debt, and we are fortunate to have had this opportunity early in the session to see the subject in an historical perspective. We are also fortunate to have had Mr. Wilmerding's presentation of the budgetary and appropriation procedures underlying the public debt in this country.

An account of what has happened as regards public debt in this and other countries provides us with generalizations and conclusions useful in understanding our own present situation, but reasoning based on actual or apparent similarities should not be pushed too far.

As Professor Fetter has pointed out, the public debt of Latin-American countries has been marked by four characteristics: There has been an almost complete absence of marketable debt held internally. A very large proportion of the public debts of South American republics has been held abroad. Promoters and loan contractors have played very important parts in the creation of these debts. Very large parts of the foreign-held debts of South American states have been created to finance public works. These four elements have not been characteristic of our own history. Moreover, these elements have combined to create a situation such that the public debts of these countries have not been closely integrated with their own domestic economies. This situation contrasts sharply with our own.

The experiences of France and England are perhaps more comparable with that of this country. Yet I am skeptical of basing too many conclusions on the apparent similarity. For instance, I am doubtful whether the French and English experience prior to the Industrial Revolution is helpful in understanding our present situation; and during the greater part of the nineteenth century this country had at its disposal a largely undeveloped continent and the benefit of a rapidly growing population.

Our present public debt is so large as compared with earlier amounts in this country—whether we look at the absolute figures or whether we compare it with some pertinent magnitude, such as national income—that I am doubtful whether our previous experience and practice is directly applicable under existing circumstances. The debt has grown so great that, as sometimes happens, the tremendous quantitative change has brought a qualitative change in the problem. Recently one of my engineering friends pointed out to me that when we build a bridge fifty feet long the important thing is to be sure that the bridge can carry the intended load; but when we build a bridge fifty thousand feet long the important thing is to be sure that the bridge itself will stand up. No burden we can conceivably put on the bridge will break it down. That is, the problem changes qualitatively as well as quantitatively as the bridge is lengthened.

I found one of the most illuminating parts of Professor Ratchford's paper to be his statistical tables, which he of course could not read to you in presenting his paper. These I recommend to you when his study is published. I wish, however, that we had better information regarding the significance of the debt in this country in the past and the part that it has played in the operation of our economy. I would like to know, for example, how the debt at different periods compared with the then existing volume of accumulated savings and the annual increments of new savings. I would

be interested in learning how ownership of the debt at different times was distributed as between institutions and persons and as among different kinds of institutions. It would also help me in my thinking if I had some idea whether funds released by debt repayment in the intervals of 1815-35, 1865-93, 1919-30 sought other forms of investment and were directly used for capital formation and business expansion, or whether they served chiefly to swell the volume of consumer spending.

One point in all three papers has impressed me strongly; that is, the important part that particular men and particular institutions (or the lack of particular institutions) play in the interpretation of affairs and analysis of what happens in the history of public debts. One need mention only such matters as Gladstone's policies, Jackson's political views, the loan contractors in Latin America, and the lack of a money market in Latin America during the nineteenth century. A general theory or conceptual scheme of public debt and debt management seems to me impossible to construct without giving careful attention to the financial men and financial institutions present in particular countries at particular times.

I would like to add one final word. Public debt is clearly a political as well as an economic question. In studying the subject we must approach it as political economists, not simply as economic theorists, not merely as politicians.

THE PUBLIC DEBT: EFFECTS ON INSTITUTIONS AND INCOME

PUBLIC DEBT AND INSTITUTIONS¹

By DONALD B. WOODWARD

The Mutual Life Insurance Company of New York

The first impressions of that great economist, Robinson Crusoe, when he landed in his postcatastrophe world, came through eyes conditioned to another environment. But in due time as his eyes became conditioned to the Isle of Despair, and with more exploration, he found that there was quite a lot more than he had first observed. Only after the passage of considerable time did he realize all that there was and what could be done with it.

Adventures into the post World War II public debt have more than a little similarity—and I suspect that not enough time has yet passed to discover how great the similarity actually is.

The first impression, due to the previous conditioning we have received, is that the public debt is a known and finite thing, consisting of the total appearing on the *Treasury Daily Statement*, and made up of the maturities and types reported in detail in the *Treasury Bulletin*. When so viewed, as preponderantly it is in current discussions, the same incorrect and myopic conclusion is reached as that of Robinson. I suggest, therefore, that we first take another and more searching look at the debt.

The public debt is a mass of contracts to transfer monetary claims within society through the federal treasury with the tax power as the ultimate resort.² I have found no statistical method to measure the total of these contracts in homogeneous units, but both quantitatively and qualitatively the debt seems to me to be something quite different than the 260 billion dollar aggregate usually denominated as the public debt.

¹ Discussion of the public debt and related matters at the Seminar on Monetary Policy at the Institute for Advanced Study, at meetings of the Committee on Public Debt Policy and its advisers, with my colleagues at the Mutual Life Insurance Company of New York, especially in the Research Division, and particularly prolonged ones with Murray Shields and Robert Warren, have been most stimulating and helpful in my consideration of this subject, and I wish to acknowledge great indebtedness; also, Mrs. Helen Graves, Reference Assistant at The Mutual Life, has been most helpful in providing information. For the thesis herein, however, I bear sole responsibility. The footnotes are intended more as reading notes than as reference to authority.

² This definition was suggested by Mrs. Eleanor S. Bagley; I am deeply indebted to her for it and wish to make full acknowledgment for what has become the cornerstone of this structure.

The mass of contracts constituting the debt ranges all the way from those which are specific and unconditional to those which are extremely nebulous.

Specific and unconditional contracts include such items as bills, certificates, single maturity bonds, commitments to pay fixed annual amounts to public housing projects annually over a long period of years, and accounts payable.

Other contracts are unspecific but also unconditional, such as the E, F, and G bonds, which vary as to amounts due and when due, or both.

Another group of contracts are specific, but conditional on circumstances, such as social security payments, pensions for government employees, guarantees of bank deposits and building and loan association shares, amounts pledged to international financial organizations, and bonds with payment dates optional to the Treasury.

Still another group is both unspecific and conditional, such as the mortgages issued by the FHA, commitments for support of the prices of agricultural commodities, and tax refund obligations.

Finally, perhaps—for my eyes may not yet be fully conditioned to this new land—are contracts wholly nebulous, such as the currency with its promise to pay something sometime, claims being pressed against the government, and the mortgages yet to be created, but which under the statute will be insured if they meet certain conditions, and which, under certain other conditions will lead to the issuance of obligations fully and unconditionally guaranteed by the Secretary of the Treasury.

Contract identification and classification by degree of specificity is only one of a number of possible methods of analysis. The contracts may also be classified by maturity or time of transfer, by extent of transferability, by rates of interest, by obligees, for example. But all such classifications have the same characteristic of starting with something clear and unmistakable, and ranging to peripheral obscurity.

The statistical and as well the conceptual problem of quantitative identification of the total and subgroups is equaled by the difficulty in identifying intent. The private borrower customarily incurs obligations to raise money for expenditure purposes and the usual view of the debt, based on the limited Treasury report concept, assimilates Treasury and private purpose. But a further look dispells this idea as a footprint on the sand changed Crusoe's. Many different intents are involved in the mass of contracts constituting the public debt. One, but only one, is the customary one to raise money for expenditure purposes. Another is to provide outlets for investment funds. Another is to provide paper appropriate for operational needs. Still another is to limit losses of some lenders, and another is the companion piece of limiting the costs of certain borrowers. Another is to protect certain groups in society. And let me hasten to add a doubt that I have identified all of them.

The dubiety of total and intent is matched by the anomalous presence of noncontractual provisions. Bluntly, the paraphrase of Daniel Drew

He who promises, anothers or his'n
Must pay for sure, or go to prison

is inapplicable regarding much of this mass of contracts we call the public debt. It is not simply that the state, like the corporation, has "no soul to be damned and no body to be kicked"³ to inhibit it: a large proportion of the contracts are unilateral, and unlike that of the United Mine Workers, there is no question of the right of the one party to alter them at will. All of the social security, deposit and share guarantee, and price support contracts are, for example, of this nature. Many of the contracts may be varied as to interest unilaterally, and in a broader sense all of them may be so varied as a result of the obligor's control of the interest rate and the necessity of the obligee to reinvest by exchange of a maturing contract for a newly offered one. And, of course, all of the contracts can be morally, if not legally, altered by the obligor by initiation or accession to changes in the purchasing power of the claims to be transferred. The mass of contracts not only defies measurement in homogeneous units, as remarked above, but deprives the usual quantitative approach to analysis of meaning. The effect of mortgage insurance is not indicated by the quantitative result of any calculations of the present value of the Treasury's liability, and the same is true of the social security contracts, of deposit insurance and many other constituents. Unhappy as the fact may be for the devotees of econometrics, the truth seems inescapable that there are subtle qualitative factors involved which cannot be analyzed by customary mathematical techniques, and that invention of techniques adequate to cope with this mass of contracts may prove to be difficult.

The debt is distinctive in still another way: it differs, I believe, from public debt as it has been known in the past. Public debt at other times has been wholly, or at least preponderantly, a fixed amount incurred for purposes of covering expenditure. Therefore, analysis of this debt by historical analogy must be cautious and is likely to be inapplicable.

This discussion leaves one still somewhat short of Crusoe's position after he saw the footprint, because he at least knew what the footprint was.

II

Crusoe, however, knew that he had seen something of very large importance in his life even if he did not know just what the importance was, and in this we are one with him. That a debt which, even if we are not able to measure it, is clearly a large multiple of any prewar total, constitutes a high proportion of total obligations of all kinds, and is tremendously more pervasive, is of large importance in our lives presumably does not need arguing. One immediate effect upon Crusoe

³ Edward Thurlow. See also Walton Hamilton, *American Economic Review*, May, 1946, p. 735.

was to establish certain marked inhibitions, and I think the presence of our new companion has a similar effect upon us.

The most immediately apparent and the most basic inhibition concerns the attitude and actions toward interest rates. Clearly, this society is impelled to a policy of low interest rates by a mass of contracts with which it labors; and this coercion transcends party lines. I do not mean to argue that the debt is the only reason for attachment to an unswerving policy of low rates, being aware of the other bases urged by many for the same policy. But the debt is certainly a dominant factor in much thinking, and its existence makes many minds receptive to theoretical or other arguments which might probably be impervious to them otherwise. The footnotes include a collection of statements from many sources, showing how widespread is the inhibition regarding low rates.⁴

"Our debt management policy is designed to hold interest rates at the present low level and to prevent undue fluctuations in the bond market. This policy has eased the financial problems of reconversion for both business and government. The stability of the government bond market has been a major factor in the business confidence which has been of such value in achieving full production. Low interest rates have also relieved the burden on the taxpayer. . . . Interest rates will be kept at present low levels." President Truman, *Budget Message*, January 10, 1947.

"In my opinion, substantial changes in interest rates, affecting all maturities, such as were formerly employed for purposes of monetary control, are now impractical. I deem them impractical because of their effect on the prices of public debt obligations, and therefore on all those holding obligations, and their effect on the cost of public debt service. . . . I do not mean, of course, that so long as anything like the present situation exists, we should abandon the short-term market to its own devices. And I do not mean that we should relax our controls so far as to break the 2½% rate on long-term government securities. The former is not necessary and the latter is not desirable." President Allan Sproul, New York Federal Reserve Bank, Address to New Jersey State Bankers Association, December 6, 1946.

"We are not on the threshold of a long upward trend in long-term interest rates. It seems unlikely that the rate on Government issues will rise above 2½% at least as far ahead as we can now see. You are all familiar with the problems that might be created by a rising trend in rates and the reasons why our fiscal and monetary authorities wish to avoid such an upward trend. Among these are the increasing cost of the huge public debt, the import on the banking system, and the possible disturbance to financial markets generally." J. H. Riddle, Vice-President, Bankers Trust Company, Address Before the New England Bank Management Conference, October 25, 1946.

"A moderate rise in interest rates, reflecting a moderate restriction of bank credit, would be ineffective for precautionary purposes, and would be ineffective as an attack even upon the actual development of an inflationary rate of spending if the latter did not owe much to an expansion of direct bank lending to business or of new capital flotations. Yet even a moderate rise in interest rates would be very unsettling and capable of quickly getting-out of control. Once the movement became well started, no one would know in advance that it would be confined to moderate proportions (unless this were officially announced, in which case much of the efficacy would be sacrificed). All anyone could be sure of was that the long established policy of low or declining interest rates had been withdrawn. Disorderly selling in considerable volume might develop, necessitating large-scale market support by the Federal Reserve System to avoid sharp price declines." Lawrence H. Seltzer, "Is a Rise in Interest Rates Desirable or Inevitable?" *American Economic Review*, December, 1945, p. 843.

"The government desires and expects that low interest rates will continue after the war. It proposes to pursue a monetary policy which will encourage, through low interest rates, the investment of funds in productive capital contributing to employment." "Canadian White Paper on Employment and Income," *Federal Reserve Bulletin*, June, 1945, p. 542.

But while the interest rate inhibition is the most prominent, there are others which, while less documentable, seem to me little less firmly fixed. To not a small degree they rest on the interest rate inhibition, but they also have some basis of their own.

"A policy of low interest rates clearly benefits the taxpayer by making possible a lower level of government expenditures and consequently a lower level of taxation than would otherwise be possible. More important, low interest rates will be a stimulating force in the economy generally, as they will make it possible for the home buyer to get more house value for each dollar of monthly payment; for state and local taxpayers to get more schools and more hospitals for their tax dollars, and for industrial concerns and public utility companies to get more plant for every dollar of their fixed charges." (Then) Secretary of the Treasury Fred M. Vinson, *New York Times*, November 28, 1945, p. 33.

"The interest policies followed in the refinancing operations will have a major impact not only on the provision for interest payments in future budgets, but also on the level of interest rates prevailing in private financing. . . . Low interest rates will be an important force in promoting the full production and full employment in the postwar period for which we are all striving." President Truman, *Budget Message*, January 22, 1946.

"The Federal Reserve stands ready to purchase short-term government securities in the open market in order to prevent short-term interest rates from rising above the level the government is now paying. This assurance is necessary from the standpoint of the government's financing operations, and was given because the Board does not favor a higher level of interest rates than the government is now paying." Federal Reserve Board, *1945 Annual Report*, p. 7.

"So one result of this unprecedented government debt which now faces us is this: in order to keep down taxes and prevent the price of government bonds from falling as they did after the last war, the federal government is going to have to keep interest rates stable." Gov. Thomas E. Dewey, Speech in San Francisco, *New York Times*, September 22, 1944.

"So we come down to these two circumstances: (1) That the government must willy-nilly maintain an easy money policy; (2) that all of us who are concerned with the security of our banking system and the economic stability of our country must hope that the government can succeed in its objective. Accordingly, I would place my bets on the side of continued low interest rates." New York State Superintendent of Banking Elliott V. Bell, January 25, 1945.

"... it is highly desirable that the Treasury follow a militant policy of interest rate reduction except where subsidies are to be granted on the basis of broad social desirability." Paul A. Samuelson, *Postwar Economic Problems* (McGraw-Hill, 1943).

"I must emphasize how much the task of my successors in dealing with this [internal debt] will be lightened by the successful establishment and maintenance of cheap rates of borrowing by the Treasury. . . . I reiterate the practical possibility as well as the advisability of low interest rates after the war. . . . The favorable effect on the finance, for example, of the housing program is obvious. But that is no more than one impressive example of the beneficent effects which will be felt in many directions. Some authorities have thought of a fall in the value of money as something which will become almost inevitable if the national debt rises too high. . . . Now it seems to me a much better means has been discovered, in the shape of a low interest rate, for mitigating the real burden of the national debt incurred in time of war. It has been the establishment and maintenance of low rates which have helped to remove that particular threat to the maintenance of the purchasing power of money." (Then) Chancellor of the Exchequer Sir John Anderson, *Hansard*, April 24, 1945, pp. 714-715.

"The level of money rates can have a profound long-run effect on the volume of investment, particularly in the case of heavy, long-lived capital goods such as buildings and other improvements to land. The lower the rate of return at which existing assets of this character are capitalized, the higher their capital value, and the easier it is, at any given level of construction costs, for new structures to compete with them. There can be no doubt that low money rates (whether interest rates or equity yields) if continued over a period of years, tend to increase both the stock of capital goods and the investment required to create and maintain it." George Terborgh, *The Bogy of Economic Maturity* (Machinery and Allied Products Institute, 1945), p. 212.

That an inhibition regarding commodity prices results, is scarcely less evident than that one exists regarding interest rates. The debtor's income is affected by prices just as its costs are affected by interest rates and the reaction tends to be the same for the same reasons. Actions are taken—or are not taken—which encourage high (sometimes euphemistically called “stable”) prices, and conversely actions are taken—or are not taken—against any tendency, or even the possibility of any tendency, for declining prices. The risk of inflation is deemed less serious than the risk of deflation insofar as action, though not necessarily words, is concerned. Again, I am not unaware that actions taken or not taken are supported by premises other than the existence of the debt, but that the existence of the debt makes many persons

“One of the most important single inducements to private investments is the maintenance of a low interest rate.” U. S. Department of Agriculture, Miscellaneous Publication No. 570, July, 1945.

“The stability of the government bond market results in a degree of business confidence which is of tremendous value in achieving and maintaining full production. It contributes to the confidence of the public in the credit of the United States and in the enduring stability of the currency. We must not impair this confidence.” Secretary of the Treasury John W. Snyder, Address to the American Bankers Association, September 24, 1946.

“It may well be that in the future the rates of interest will be lower.” Chancellor of the Exchequer, Hugh Dalton, “Britain's Credit Is a National Interest,” National Savings Committee.

“Federal Reserve support of the bond market should be withdrawn cautiously, but withdrawn. Money may thus be allowed to become, but not be *made* less cheap, though not dear.” R. C. Leffingwell, “Managing Our Economy,” *Yale Review*, 1945.

“Since most of the short-term debt, outside of the Reserve System, is held by the banks, an increase in the short-term rate would add to bank earnings, which are still at very high levels due to government bond holdings. It would add to the cost of carrying the public debt. It would not reduce the existing money supply. It would not reduce consumption. It would add nothing to production—the basic need of the hour. It would have no real bearing as an anti-inflationary factor. We have been witnessing a rapid rise in business, consumer, and mortgage credit. It is hardly reasonable to suppose that short-term rates on government securities could be increased sufficiently to deter this private borrowing. . . . In my opinion, this long-term rate should not be permitted to go up, and if need be, the market must be supported by the Federal Reserve. Otherwise, the cost of carrying the public debt would be increased, many outstanding savings bonds yielding lower rates would be cashed in and the funds invested in the higher yield market issues, and heavy losses would be incurred by holders of outstanding market bonds.” M. S. Eccles, Address to Bank Management Conference of New England Council, October 25, 1946.

“ . . . a rational management of the public debt and of monetary policy should make a 2% average interest rate on government bonds a reasonable expectation.” Alvin Hansen, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 216.

“A policy of cheap money should be regarded as an integral part of any plan for full employment [p. 149]. . . . It should be possible to reduce the rate of interest well below 2½%; this change, desirable and justifiable on many grounds, is the simplest route to lower rents [p. 165]. . . . The rate of interest must be kept low—as low as possible [p. 338].” Sir William H. Beveridge, *Full Employment in a Free Society* (George Allan and Unwin, 1944).

“If my assumptions about the basic characteristics of the past transitional period are correct, the chief function of monetary policy will be to keep interest rates low.” Alan R. Sweezy, *American Economic Review*, May, 1946, p. 303.

“Cheap money is an essential part of any full employment policy.” *The Economist*, March 2, 1944 (Centenary issue), p. 38.

receptive to and users of the other arguments can hardly be doubted.⁵

Akin to both of the foregoing is an inhibition regarding the quantity of money. Society today does not want any significant deflation in the quantity of money and will go to great lengths to avoid it. Again, the existence of the debt is not the only premise which makes any thought of contraction anathema, but the debt opens the door and presents the other reasons to court under favorable auspices.⁶

Taxation likewise appears to be significantly inhibited by the existence of the debt. The abolition of tax exemption in that part of the debt consisting of public issues in March, 1941, was one of the evidences. Some of the attachment to high and progressive rates is of the same nature as that which abhorred Treasury *rentiers* in other days and in other places. The discussion of specific taxes on specific debt-holding institutions is another example.⁷

⁵ "The government will be prepared, in periods when unemployment threatens, to incur the deficits and increases in the national debt resulting from its employment and income policy, whether that policy in the circumstances is best applied through increased expenditures or reduced taxation." Canadian Minister of Reconstruction, Employment and Income, Presentation to Parliament, April, 1945, p. 21.

⁶ "The fact is that inflation of bank credit is almost inevitable under a rate pattern which offers a constant inducement for banks to borrow from, or sell short-term securities at artificially low rates to the Federal Reserve banks while at the same time extending their investments in the longer-term higher yielding issues." *National City Bank Letter*, November, 1945.

⁷ "Imagine for a moment what would happen if we were plunged into another depression. Would we then have the cash or the willingness to pay the taxes necessary to meet just that annual debt charge? The answer, bluntly, is 'no.' And that, I think, brings us to the fundamental significance of America's debt, which is: We must remain prosperous and maintain full employment to carry it." Sylvia F. Porter, *New York Post*, November 21, 1945.

"During the past three or four years, and especially in the past year, you and I have heard and learned a great deal about the dangers of inflation and deflation. Both are bad. But I am here to tell you that in the period from 1929 to 1933, I learned, through struggle and personal and official punishment, that, of the two evils, deflation is equally as deadly as inflation, if not more so." Undersecretary of the Treasury O. Max Gardner, before National Association of Supervisors of State Banks, September 19, 1946.

⁸ "Although the average rate of interest on the entire debt is about 2%, the rate on short-term loans held by banks is much lower. This suggests the possibility of lowering the average rate still further by increasing the proportion of debt held by the banks as short-term loans." *What Peace Can Mean to the Farmer*, Miscellaneous Publication No. 570 U. S. Department of Agriculture, July, 1945, p. 25.

⁹ "... the absolute size of the national debt does not matter at all." Abba P. Lerner, "Functional Finance and the Federal Debt," *International Postwar Problems* (October, 1945), p. 541.

"There was a time when the public had to accept whatever volume of deposits the central bank thought was good for it. Now, by contrast, the public in effect decides what volume of deposits the central bank must provide. This is, indeed, a revolutionary change, but it is not one that can, in strict logic, be attributed to the war. The revolution in fact occurred as long ago as 1932 with the adoption of the cheap money policy. The 'new' proposition—for such it still seems to many—depends absolutely upon the assumption that the authorities will seek to maintain cheap money. So long as they do, they must dance to the public's tune. They can regain their freedom of action only at the expense of the cheap money policy." *The Economist*, August 4, 1945.

¹⁰ "The government has two ways of channelling idle savings back into the income stream; that is, either through taxation or through borrowing. As between the two, I believe that taxation must carry the main burden. I would be most hesitant to see

The Brobdingnagian and pervasive aspects of the debt inhibit reliance upon or even use of that nineteenth century ideal called the market place, at least for obligations. The stake of the state as viewed from F Street, Wall Street, and Main Street is too great to permit the chance that the higgling will produce unwanted results. More or less firm control will produce the desired results, it is confidently believed, and more or less firm control is thus enthroned. Other proponents, of course, urge the enthronement and even write persuasive statements of legitimacy, but the debt is, I believe, the Stone of Scone.⁸

further additions to the public debt after the war." M. S. Eccles, "The Postwar Price Problem—Inflation or Deflation." Address to National Industrial Conference Board, November 16, 1944.

"The individual income tax is progressive, on the 'ability to pay' principle, and heavily taxes large incomes from whatever source derived. The hidden tax of cheap money strikes at rich and poor alike. Its discrimination is directed at those who save to provide for the future." *National City Bank Letter*, June, 1946, p. 69.

"A very considerable proportion of interest payments tends to be saved, because the bulk of the debt is owned by wealthy individuals and by banks. Although the leakage from the income stream which results should not be overestimated, it undoubtedly exists. Since our present tax structure already weighs heavily upon the higher income groups, very little can be done in the way of tax readjustment to reduce this new leakage." Henry C. Wallich, "Debt Management as an Instrument of Economic Policy," *American Economic Review*, June, 1946, p. 299.

"An internally held debt represents a transfer of funds *within* the community. It is true that attention must be paid to the character of the tax structure through which the transfer payments are affected." Alvin H. Hansen, *Fiscal Policy and Business Cycles* (W. W. Norton & Co., 1941), p. 172.

"Since the final impact of all taxes rests on individuals, regardless of where such taxes may be levied, the committee believes that direct progressive taxation of incomes is not only the soundest tax vehicle in a democracy, but will also be the least repressive to production and employment." House Special Committee on Postwar Economic Policy and Planning, "Economic Problems of the Reconversion Period," September 8, 1944.

"Retaining high taxes on the masses of consumers for general reduction of debt held by financial institutions may destroy purchasing power and create unemployment. But the use of progressive taxes for the redemption of bonds held by millions of individual savers have a stabilizing influence on incomes and employment." President Truman, *Budget Message*, with outlays for war and its aftermath, January 10, 1945.

"Nor can we afford to forget the political drawbacks of the large *rentier* class." Howard S. Ellis, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 139.

"The tax structure that taxpayers, both individual and corporate, can best live with will meet the test of fairness by relying on levies based on ability to pay. . . . Our chief reliance should be on those taxes which give fullest recognition to differences in tax paying ability and which draw least heavily on the dollars most likely to flow into consumer markets and productive investment. On balance, the progressive personal income tax best meets these tests and accordingly should be the cornerstone of our peacetime revenue system." *Annual Report of the Secretary of the Treasury for the Year Ended June 30, 1945*, pp. 3, 4.

⁸ Low cost of money "would facilitate the task of refunding the public debt and safeguard the value of government security holdings of the millions of individuals, educational institutions, trusts, banks, insurance companies, and other investors, who have placed tens of billions of dollars in government bonds to help finance the war." *Annual Report of the Federal Reserve System*, 1943, p. 19.

"In order to keep down taxes and prevent the price of government bonds from falling as they did after the last war, the federal government is going to have to keep interest rates stable." Gov. Thomas E. Dewey, Address in San Francisco, September 22, 1944.

"Just as I see no reason for substantially higher interest rates in the postwar period, I do not see any need for a wholesale postwar funding of the public debt into long-term bonds. In the first place, it would cost the taxpayer more in interest. Next, it would

Attainment of the numerous objectives of the debt requires that its evidences be attractive to hold, and one of the most attractive attributes to a generation which saw prices melt away in the early thirties

shift whatever risk there is inherent in fluctuating interest rates from the government, which is able to bear it, to individuals, institutions, and corporations. Certainly, the day is past when the United States Government need ask its citizens or its business enterprises to insure it against change in the rate of interest." (Then) Secretary of the Treasury. Henry Morgenthau, Speech at War Bond Rally, October 14, 1944.

"The impact effects of a falling bond market, moreover, could well be dangerous." Lawrence H. Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, p. 73.

"If marketable securities were to be issued at rates to yield appreciably more, the present holdings would decline in value and the banks would lose heavily unless the present values were underwritten by the government in some way." Harley L. Lutz, *Tax Review*, September, 1944.

"The necessity for a high degree of stability also arises out of the enormous debt that has been created and the large holdings of banking institutions. Wide fluctuations in government bond prices would create a heavy burden of adjustment for both the Treasury and the banking system. The maintenance of confidence in government security prices is essential in order to prevent unnecessary liquidation and market disturbances. The enormous war debt has created a situation which has made it necessary to prevent the wide movements of interest rates that characterized our economy during certain periods in the past." Bankers Trust Company, "United States Government Securities and the Money Market," January, 1945, p. 22.

"When the debt is large and the bank share of it substantial, stability of interest rates becomes increasingly essential and general monetary control has to give way to a policy of 'maintaining orderly market conditions' for government securities." John H. Williams, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 382.

"The most important requirement of the small investor is that the securities which he purchases shall be absolutely free from risk. The small investor wants to be sure that he can get his money back when he needs it. He accepts on faith the type of obligation which the government offers him. He does not want to gamble with his principal. The Government securities sold to small investors during the last World War were marketable. They were consequently subject to price fluctuation. After the war, the prices of government bonds fell precipitously. Four Liberty Bonds, the largest issue, sold below 83 in 1920. The government of course met all of its obligations issued in World War I in full, in accordance with their terms. But many small bondholders who sold during the decline were embittered against the Government. They had bought the bonds at the Government's request, and did not understand—and could not be expected to understand—the 'normal risk of the market.' I have said on previous occasions, and I say here again, that I do not anticipate an increase in interest rates (with a consequent decline in bond prices) after this war. But the Treasury felt—and Congress agreed with us—that the small investor is entitled to more than merely the expectation of a stable market after the war. He is entitled to a legal guarantee." Report of Secretary of the Treasury Henry Morgenthau to Congress, July 21, 1945.

"Past experience has demonstrated that the maintenance of stable and prosperous conditions cannot be assured by exclusive reliance upon the free play of market forces. . . . With the public debt as large as it is today—twice the entire private debt of the country—a free market is out of the question if that is taken to mean an unmanaged, unsupported market." M. S. Eccles, Address to Bank Management Conference of New England Council, October 25, 1946.

"I do not see how the Federal Reserve authorities can decide otherwise than to do everything they can to support the government bond market. The Treasury's influence would certainly be expected to be exerted powerfully to this end, for apart from any theory respecting the continuous desirability of low interest rates, the Treasury will be facing large new and refunding issues for many years to come." Lawrence H. Seltzer, "Is a Rise in Interest Rates Desirable or Inevitable?" *American Economic Review*, December, 1945, p. 849.

"The control of capital values in the bond market has become one of the most important aspects of present-day monetary policy. A central banker, now, shows the same concern

is convertibility into cash at stated amounts. Consequently a powerful inhibition prevents conversion of any of the debt into investment instruments in the purist's connotation. The logic of Henry Simons' proposal may be impeccable⁹ but the chances for its acceptance seem slight indeed. Not one element of the debt from certificates to insured mortgages shall cross that line of par or purchase price or fail to be convertible into cash without market risk.¹⁰

The public debt's proselytism of liquidity inhibits risk-taking investment, already truncated by the terrifying passage of the thirties and numerous environmental factors including the tax structure, the labor quest for power, and the combination of undigested new and outmoded old regulation. Financial security in other days was obtained by the promise to pay of a reasonably responsible obligor or confidence in ability to attain it through thrift and ingenuity. While these are by no means unused today, the number of cases where the stamp of government, or assurance that it can be had in adversity, is the only verisimilitude of security, is not small.¹¹

The inhibitions of money supply, interest rates, and prices at least furthered by the debt in turn produce an inhibition: that against substantial retirement of the debt itself—unless by the "painless" method of the lucky accident of a cash balance accumulated by excess borrowing. The risk to interest rates, the risk to the price level, the risk to the money supply which debt retirement engenders is too great for the comfort of some of the apprehensive, and those who would have the funds for pet expenditures or pet tax reliefs do little to discourage the fears.¹²

over developments affecting his carefully constructed rate pattern as over movements in his member banks' reserve position. To some extent, of course, this is the result of such commitments as exist between the central bank and its government for the maintenance of the price of public securities. But beyond that, there is the realization that major movements in security prices may prove definitely unsettling." Henry C. Wallich, "The Changing Significance of the Interest Rate," *American Economic Review*, December, 1946, p. 780.

⁹ "Our federal debt should be refunded promptly and totally into currency and consols . . . we should mop up money not with other moneys slightly disabled but with money contracts as much unlike money as possible." *Journal of Political Economy*, December, 1944, pp. 357, 359.

¹⁰ "The second major objective of the Treasury in its war borrowing—second only to the objective of avoiding inflation—has been to adapt the securities which it has offered to the public to the requirements of the various classes of investors." Report to Congress by Secretary of the Treasury Morgenthau, July 21, 1945.

¹¹ ". . . the F.H.A. has aided the marshalling of private capital for a most worthy social purpose, with the government assuming the unpredictable risk. What better formula has yet been devised to aid the continuation of capitalistic and democratic freedom of enterprise?" L. Douglas Meredith, "New Methods of Realty Financing," Address in Missouri, October 25, 1945.

¹² "From June 30, 1937 to March 30, 1938, the Treasury's books showed a cash surplus of about 100 million dollars. That was the last time the federal government balanced its budget. It was the *only* time the New Deal ever did. This retreat from deficit spending was accompanied by one of the swiftest industrial declines in American history. . . . To

These eight inhibitions—regarding interest rates, commodity prices, quantity of money, taxation, the market place, convertibility, risk-taking, and debt retirement—not only exist, but existing, have great power, as inhibitions usually do. Certainly, these inhibitions induced by the mass of contracts for the transfer of monetary claims have changed, or at least have been a factor in changing, our procedures markedly just as the inhibitions resulting from the footprint did to Crusoe.

III

The institutions of society—the effect upon which of the public debt I am supposed to discuss—have been identified by Mr. Robert B.

retire large amounts of government debt when economic stagnation threatens would almost surely send the economy into a tailspin. The downrush of 1937-38 would be mild in comparison." Leo Barnes, "How Dangerous Is the Public Debt," *Atlantic Monthly*, February, 1946, p. 94.

"We may oversimplify the situation when social security taxes exceed current benefits by saying that present workers are reducing the funded debt in exchange for an expectation that future workers will produce for their consumption when they become beneficiaries of the social security scheme. Bearing in mind that social security wage taxes are distinctly regressive, this leads to the question, is it good policy to use this kind of a tax to reduce the public debt." *Issues in Social Security*. A Report to the Committee on Ways and Means of the House of Representatives by the Committee's Social Security Technical Staff (G.P.O., 1946), p. 116.

"However, it is neither necessary nor desirable that the program of debt retirement provide for a fixed annual payment." *Postwar Agricultural Policy*, Report of the Committee on Postwar Agricultural Policy of the Association of Land Grant Colleges and Universities, October, 1944, p. 9.

"In the years ahead, the debt retirement policy of the Treasury will have to take into consideration the effect of public debt reduction on business activity and the potentialities of employing variations in the amount and ownership of the debt as an instrument of credit control." *Management of the Public Debt*, Institute of International Finance of New York University, Bulletin 142, February 18, 1946, p. 5.

"The main point to be made here is that what we ultimately aim at in our economy is a reasonable stability of prices and that we ought to repay the debt or increase it further mainly according to whether or not we expect prices to rise or whether we expect them to fall." Neil Jacoby, *How Dangerous Is the National Debt?* (University of Chicago Roundtable, May 12, 1946), p. 18.

"At the present time it looks as though there will be little net debt redemption within the next generation. Substantial redemptions will be costly—far too costly it appears for taxpayers to desire debt redemption in preference to reduction of current taxes [p. 281]. . . . Substantial reductions in the federal debt during the next few decades seem to be a remote possibility. We must rather find our consolation and pride in the wise management of the national obligations [p. 282]." Simeon E. Leland, "The Government, the Banks and the National Debt," *Commercial and Financial Chronicle*, January 17, 1946.

"Whether a public debt should be reduced or not depends exclusively upon the general economic situation and not upon judgments derived from private accounting considerations." Alvin H. Hansen, *Fiscal Policy and Business Cycles* (W. W. Norton & Company, 1941), p. 144.

"The more impressed one is by the theory that our economy tends to stagnate, the more objectionable is the repayment of debt [p. 170]. . . . It may be a shock to many to learn that a public debt of \$4,000 billion may be carried by the economy without a collapse of the capitalist system, a repudiation of the debt, or a great inflation. Yet the arithmetic of the problem suggests this conclusion [p. 184]. . . . We hope that a public debt of \$4,000 billion or even of \$1,000 billion will not be necessary. In any case, the man in the street worries too much over a public debt of \$100 to \$200 billion [p. 185]." Seymour E. Harris, *Postwar Economic Problems* (McGraw-Hill, 1943).

Warren¹³ as the family, the church, the business organization, and the state. Around and through these four, the individuals of society have organized themselves for the accomplishment of the ends they seek. And around and through these four it is obvious that the tendrils—in deference to Mr. Chase's semantics I do not say tentacles—of the public debt and the inhibitions it has induced extend profusely. The debt, as here defined, and the resulting inhibitions, is having and I think will continue to have, a marked effect on all four of the institutions.

The basic functions of the modern family, after the erosion of its role by urbanization and division of labor, are three: procreation, education, and living.¹⁴ These functions motivate a variety of decisions regarding the determination and direction of effort, expenditure, accumulation, and investment—all designed, wisely or unwisely, to accomplish the family's ends.

Upon these decisions the mass of contracts called "the public debt" and the induced inhibitions exercise now, and may in future exercise even more greatly, significant influence. That influence, small or great as it may be, constitutes pressure for a passing on, a transference, to other institutions of society, of some responsibilities, or parts of responsibilities now and hitherto lodged with the family. Currently most striking is the further transference to the business organization and the state of the responsibility for necessary financial liquidity. But other responsibilities being more or less rapidly passed on to other institutions, at least partly due to the debt and the resulting inhibitions, include provision for personal catastrophe, credit worthiness to assure reasonable financial flexibility (a term, incidentally, being more and more made synonymous with need), maximization of income, provision of education and training, and investment of savings and the resulting administration of investment.

In all of these instances—and study will doubtless reveal others—the mass of contracts, and the resulting inhibitions, are influential. Sometimes they accentuate other influences, sometimes they counter others, sometimes they are alone. But I believe they can be stated as positive, even without the necessity to rely upon that professional perihelion of unreality "other things being equal."

In essence, the influence of the debt is toward further defunctionalization of the institution of the family.¹⁵

¹³ *The State in Society* (Oxford University Press, 1940), p. 4.

¹⁴ See Blackmar and Gillin, *Outlines of Sociology* (Macmillan, 1920), pp. 112-123, and Marion B. Smith, *Survey of Social Science* (Houghton Mifflin Company, 1945), pp. 177, 199, 281.

¹⁵ "When full employment is added to social security, the sanction for slackness almost disappears: the worker knows that he is unlikely to lose his job and that his sufferings

The second of the four institutions identified by Mr. Warren is the church. Leaving aside the spiritual, the basic temporal functions of the church are education and charity.¹⁶ Upon these functions the debt appears to be exercising substantial influence from two sides: the church's means to perform the responsibilities are shrinking, and the demands upon it are being reduced as the family transfers them to the business organization and the state. The result is that the church is being further defunctionalized as to temporal activities; it is for others to say whether its spiritual function will be affected by this development.

Business organization, Mr. Warren's third institution, contains three functions: eleemosynary, productive, and claim administrative. These functions are sometimes mixed in the same corporation or association, sometimes not. But whether or not mixed in organization units, the debt has a marked influence.

The eleemosynary function is in the same present and future position as the temporal functions of the church, and the influence of the debt appears identical. Some remarks of Dr. Vannevar Bush are illustrative of this group: "... during the past ten years the amount of new endowment to medical schools has greatly diminished. At the same time the income from present endowment has been cut by one third. . . . Another source of research funds is the foundations, but, as in the case of the universities, the income from foundation endowment is decreasing."¹⁷

From the productive function of business organization, as from the family, certain responsibilities are being in part or in whole passed on, under the influence of the debt. These include the responsibility for liquidity; the responsibility, or type, of employee compensation; determination of the rate earned on invested capital;¹⁸ and the pricing of products. Clearly, if the transfer of the responsibilities proceeds beyond a certain point—and some believe we are already near that point—the responsibility for the volume of private production, distribution, and employment itself will have passed on from the production function as initiative is diminished by rising evaluation of risk and falling expectation of profit. In essence, as in the case of the family, the church, and the eleemosynary organization, the effect of the mass of contracts called the debt, and the inhibitions induced by it, is the further de-

will be limited if he does." "The Carrot and the Stick," *The Economist*, June 29, 1946.

"The adoption of liberal old-age pensions may considerably affect the structure of the family." Robert Warren, *The State in Society* (Oxford University Press, 1940), p. 32.

¹⁶ Marion B. Smith, *Survey of Social Science* (Houghton Mifflin Company, 1945), pp. 301, 309.

¹⁷ *Science, the Endless Frontier* (July, 1945), pp. 50, 52.

¹⁸ "... the trend toward lower rates of profit on larger investments is inevitable; and business will suffer less by accepting this trend and adjusting itself to it, than by resisting it. . . ." John Maurice Clark, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 107.

functionalization of the productive function of business organization.

The claim administration function of the business institution encompasses what are usually called financial institutions, together with the large financial activities within the production function organization, and together with labor unions, farmer, and veteran groups which in essence are organizations dealing with past, present, and future financial claims of their members. This claim administration function is the destination of many of the responsibilities being transferred from the family, the production function and to a degree from the church and eleemosynary organizations: parts of their responsibilities for financial liquidity, provision for personal catastrophe, credit worthiness, maximization of income, investment and investment administration, education and training and charity, employee compensation, determination of rate earned on invested capital, and pricing of goods and services.

The influence of the debt upon these claim administration groups, however, is the same as the other functions which we have examined; the responsibilities are being passed on, in this case, to the state. Both the responsibilities passed to claim administration from other groups, and as well those heretofore regarded as its own, are being passed on. Indeed, in many respects, the process of transfer is even further advanced and more comprehensive in the claim administration function than in any of the other institutions. For there has passed, or is rapidly passing, to the state the responsibility for the cost of service, the rate of return, the liquidity, the nature and administration of assets, the scope of function—virtually every key responsibility, both in domestic and as well in the international sphere. As Miles Colean has recently succinctly stated it: "One thing is evident. The financial institutions and the monetary system are going to have to live with government in an association that makes their past intimacies appear Platonic."¹⁹

Indeed, it would not be difficult to argue that, conceptually, the claim administration organizations are within the institution of the state instead of within the institution of business organization. I am not yet ready to go so far, though the direction of movement is inescapably apparent. I should rather interpret the development as an extension of business organization some distance into the area which many wish the state to occupy and which it does occupy in other places and at other times. In any event, as in the other institutions and functions, a process of defunctionalization—or, if you prefer, refunctionalization—is occurring as the result of the mass of contracts called the debt, and the inhibitions resulting from it.²⁰

¹⁹ Letter to the writer, October 3, 1945.

²⁰ "... the future of commercial banking will largely be determined by the policies

The point about these three institutions—the family, the church, and the business organization—which constitute what is usually referred to as the private sector of society can be summarized in the words of Elliott V. Bell, Superintendent of Banking in the state of New York: "The important thing is that a debt of this size inevitably compels government to intervene more and more in the economic system."²¹ I should only like to add the words of Sir Henry Clay regarding another era: "I myself now believe any return to pre-1914 conditions to be wildly improbable. I believe that the pre-1914 epoch, far from being

pursued by the Treasury in managing the debt. . . . Relatively little of traditional, one is tempted to say orthodox, banking theory is applicable to the present or to the prospective situation of the commercial banks. . . . The large volume of Treasury securities absorbed by the banks during the war has transformed the structure of their assets, greatly changed their relationship to the federal government, and it may be, altered their functions in the economy." Charles C. Abbott, *American Banker* (1945).

" . . . the textbook definition of a bank is now badly out of date. . . . A bank nowadays is an institution which holds the credit money of the community, created by Treasury financing, and uses it to finance the government deficit. . . . Thirty years ago, the banks were trading institutions like others, with particular responsibilities for probity and caution, but with no closer organic connection with the central mechanism of the state than many other industries. Today they have been caught up in that mechanism beyond the possibility of disentangling. It is easy to show that the ingenious device of simple nationalization would create many problems and solve none. But it is even easier to show that some readjustment of the banks' relationship to the community will soon be inescapable." *The Economist*, March 2, 1944 (Centenary Issue).

"In whatever direction we may turn, we shall find that the management of the public debt will have a profound effect upon the future of the investment of life insurance funds." George Willard Smith, President, Life Insurance Association of America, *Proceedings, American Life Convention*, 1945.

"The expansion of the domestic national debt seems to have become a psychological Frankenstein which will haunt the credit policy of the United States for many years. In an attempt to keep money cheap in order to keep down the interest burden of the national debt, the banking authorities are prepared to go a long way towards greater regimentation of the commercial banks." "Banking Control in the U.S.A.," *The Economist*, August 24, 1946.

"From the point of view of the banks themselves, the question is whether they can afford *not to reduce* the cost of credit creation to the public Treasury. This credit creating power, lodged under the trusteeship of the banks, is fundamentally a government function to be exercised for the common good. When the people, through their government, borrow from themselves, through banks created by the government, the cost of such borrowing is a matter of national concern." Simeon E. Leland, "The Government, the Banks and the National Debt," *Commercial and Financial Chronicle*, January 17, 1946, p. 283.

"The public debt is intimately interwoven with the entire financial structure of the country. On June 30, 1945, the latest date for which comparable data for the various classes of investors are available, 58% of the assets of commercial banks, 60% of the assets of mutual savings banks, and 44% of the assets of insurance companies were invested in United States Government Securities. In addition, individuals held \$59 billion of United States securities, comprising the largest holdings of any single nonbank investor group." *Annual Report of the Secretary of the Treasury* for the fiscal year ended June 30, 1945, p. 4.

"Since 1929 our commercial banking system has been transformed from one in which bank deposits and bank earnings were based mainly upon direct customer loans to private business to one in which they arise mainly from bank ownership of the public debt." Lawrence H. Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, p. 76.

I assume everyone will grant that a great alteration in labor union and farmer group relation to the state has occurred in the last fifteen years. D. B. W.

²¹ Address to Stockholders, Federal Home Loan Bank of New York, January 25, 1945.

normal, was a unique experience in the economic life of the race in historic times, a sort of golden age which no one now living will ever see again."²²

This might be amplified, regarding these three institutions, that nowadays the hands are still those of Esau, but the voice is increasingly Jacob's.

IV

Formally, the numerous responsibilities transferred or being transferred to the state from the family, the church, and the business organization by the influence of the mass of contracts and the inhibitions they induce have passed or are passing to the Congress. So far the Congress has in no sense been indecisive as to what to do and the very essence of this thesis is that, since society wishes to, or must, pass on these functions, Congress is and will continue to be the instrument for the formal transfer to the administrative agencies of the state. If the thesis of this paper has any validity, the action of one party from the other in these regards will in essence differ less than the actions of Tweedledee and Tweedledum, for the thesis is that this mass of contracts called the debt and the resulting inhibitions are hard, enduring, and irrevocable facts, from which pressures for certain consequences inevitably ensue:

The Moving Finger writes; and having writ,
Moves on; nor all your Piety nor Wit
Shall lure it back to cancel half a line
Nor all your Tears wash out a Word of it.²³

In the broadest sense many of the executive agencies of the state will be involved in receipt of these responsibilities in one way and another. However, most of them perform only clerical or routine administration duties in relation to the responsibilities which are passing. Examples of such agencies are the Social Security Board, the National Labor Relations Board, the Department of Agriculture, the Reconstruction Finance Corporation, the Department of Labor, the Federal Housing Administration—the list could be extended. The passed responsibilities do not lodge with them, though they perform clerical and administrative services.

The agencies more squarely recipient of the responsibilities being passed on from the family, the church, the business organization, and other government organizations are the Bureau of the Budget, the Federal Reserve System, and the Treasury. Together or separately they determine the extent and the method of the exercise of the trans-

²² *Foreign Affairs*, April, 1946.

²³ *Rubáiyát*, Stanza 71.

ferred responsibilities. Upon their decisions, their means, and their techniques depend the degree to which the responsibilities will be discharged or defaulted. Upon their wisdom will depend the validity of the claims which are involved.

But yet, among these three, I believe the influence of the debt, causing a transference of functions—both of those received from the family, the church, and the business organization and those previously lodged with these three government organizations—is operative. Perhaps it is operative with greater force and comprehensiveness than at any point yet examined. For the Budget Bureau, despite residence under the White House roof, despite the hopes of its founders and early directors, despite statutory provisions, despite a sometimes not unimportant advisory influence, despite the responsibilities nominally being passed to it, is essentially compelled by the debt, the inhibitions induced by it, and the forces thereby generated, to pass on the ultimate responsibilities in large degree. And the Federal Reserve, despite an imposing facade, despite the intensions of its founders, despite literal provisions of statute, despite being nominally the recipient of many responsibilities passed on to it by the family, the church, and the business institution, as well as by other government organizations, despite a sometimes not unimportant advisory influence, despite a collection of personnel of competence probably unequaled at any time or place, despite a well-merited and very general regard widely and justly amounting to admiration, is essentially compelled by the debt, the inhibitions induced by it, and the forces thereby generated, to pass on the ultimate responsibilities in large degree. It now is but an effectuating agency, a complex mechanism, the impulses for whose every action arise elsewhere. In the volume entitled *Banking Studies*, published by the Board of Governors in 1941, two explicit statements appear of the purposes for which the System was founded (pages 25 and 233). Excluding repetition, five purposes are listed: “better protection from overexpansion of credit”; “greater availability of bank reserves when necessary”; “a more elastic currency”; “better facilities for handling government funds without credit disturbance”; and “a more effective supervision of banking in the United States.” Four of these five functions have now essentially passed on to the Treasury, and the remaining one is essentially mechanical. Nor has it retained the large number of responsibilities since passed to it by other private or public institutions.

President Truman has stated the matter a little ambiguously but with a meaning crystal clear when he said: “The Treasury and the Federal Reserve System *will continue* their effective control of interest rates. . . . Interest rates will be kept at present low levels through continued

co-operation between the Treasury Department and the Federal Reserve System.²⁴ (Italics mine.)

It is another of history's ironies that an organization whose establishment was widely opposed for fear it would come to possess too much power, has come instead, in less than four decades, to have almost none.²⁵ The Treasury is not in fact one of the trinity, nor yet *primus inter pares*: The Treasury is the ultimate destination of all of the passing on, the transference—it, and it alone.

²⁴ *Budget Message*, January 10, 1947. A year earlier he spoke in the same vein in the combined *State of the Union and Budget Message* (January 22, 1946): "Close wartime co-operation between the Treasury Department and the Federal Reserve System has made it possible to finance the most expensive war in history at low and stable rates of interest. *This co-operation will continue.*" (Italics mine.)

²⁵ "The principal new problem which now faces us in the successful management of money grows out of our participation in World War II. It has been created by the tremendous increase in the size of the federal debt and by the extent to which public debt obligations have become a part of our banking and institutional assets. On the one side this has emphasized the relative importance of fiscal policy and debt management, as contrasted with monetary policy, as a means of economic control, and on the other side, it has greatly reduced the area in which monetary policy is free to work or can work effectively. The cost and availability of credit were the twin weapons of domestic money management as practiced by central banks. In my opinion, substantial changes in interest rates, affecting all maturities, such as were formerly employed for purposes of monetary control, are now impractical. I deem them impractical because of their effect on the prices of public debt obligations, and therefore on all those holding such obligations, and their effect on the cost of public debt service. At the same time control over the availability of credit has been substantially relinquished, for the time being, by obligations or responsibilities which have been assumed in support of the government security market." President Allan Sproul, New York Federal Reserve Bank, Address to New Jersey State Bankers Association, December 6, 1946.

"The logical consequence, then, of providing a guaranteed market for Treasury bills and of establishing a fixed pattern of rates on other Treasury securities was to destroy the power of the Federal Reserve authorities to refuse to furnish reserves . . . the Federal Reserve is not only weak, but impotent when it comes to controlling credit by the indirect instruments of policy. This condition is inevitable, granting (a) the present distribution of government securities in bank portfolios, and (b) existing Federal Reserve policies vis a vis interest rates and government securities." Charles R. Whittlesey, "Federal Policy in Transition," *Quarterly Journal of Economics*, May, 1946, pp. 343, 346.

"The Reserve System, as you recall, was set up, among other things, to exercise price controls via bank reserves and discount rates; but under present conditions . . . it cannot make these controls effective." Simeon E. Leland, "The Government, the Banks and the National Debt," *Commercial and Financial Chronicle*, January 17, 1946, p. 282.

"The actual power of the Reserve authorities to enforce a substantial over-all contraction of bank credit is dubious. . . . The new position of the public debt as the chief earning asset of the commercial banks raises a number of major problems for the Reserve System: its control of commercial bank lending has been seriously impaired. When a commercial bank has a large portfolio of marketable securities, it need not seek the aid of its Reserve bank to expand its direct loans after using up its excess reserves. It can sell securities in the open market. The kind of loans it makes as well as their aggregate amount is placed beyond the reach of the Reserve bank. . . . The maintenance of an orderly bond market for government securities has assumed a new importance that conflicts with quantitative methods of controlling credit." Lawrence H. Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, pp. 71, 74.

"As long as the Federal Reserve System was under the necessity of supporting the short-term section of the government security market, the initiative in determining the amount of Federal Reserve credit available to the banks was shifted from the System to the commercial banks, and effective control over the ability of the banks to expand their

For the mass of contracts we call the debt is an imperious creation, a unitary thing. It controls the assets and the actions of the Federal Reserve just as of other financial organizations, and it determines the decisions of the Budget Bureau, not vice versa. Its requirements—as set forth in this paper, though not as more narrowly conceived—determine Federal Reserve policy, and not the reverse. And it has but one semblance of a master, is shaped by external influence in one place alone, the Treasury.

V

From the materials of the social revolution of the thirties and the legacy of the financing of the War of the Totalitarians, a new and different central bank has been erected in the United States. It is located on Pennsylvania Avenue, in Washington. It is currently housed in what we call the Treasury Building. It is staffed by persons regarded—and who regard themselves—as being on the pay roll of the Treasury Department. Its telephone number is Executive 6400, and it uses the stationery of the Treasury, and the Treasury Seal. But these appearances should not deceive us.

This fourth central bank of the United States is different from any of its predecessors, or any other institutions this society has constructed. It has greater responsibilities, it has greater powers, it has greater resources and techniques, it has directly and indirectly larger personnel, it has larger and wider influence—and it has not yet even been consciously organized or begun consciously to function!

The powers, methods, and resources of this fourth central bank of the United States have not anywhere that I know been listed, to say nothing of being systematically outlined and explored. Such exploration will, I venture to prophesy, be the focus of attention for many years to come of students who heretofore have concentrated upon such pieces of the structure as central banking in the old sense, savings and investment, fiscal policy, and the like. There are many pieces, as of a jigsaw puzzle, and it will be the work of many students and much time to put

investments and deposits was impossible." *Annual Report of the Federal Reserve Bank of New York*, 1945, p. 20.

"From the standpoint of Reserve System credit policy, the legacy of war finance is a radically altered banking system. Traditional instruments of general Reserve credit policy have been weakened, at least as far as restraint of bank credit expansion is concerned. In other words, these methods are no longer two-way instruments that can be used either to discourage or to encourage bank credit expansion. This is because commercial banks with their large holdings of government securities possess a medium for obtaining funds at will with which to expand other types of loans and investments. They can sell such securities to the Reserve banks and create the reserves which may be used as the basis for multiple credit expansion. The Reserve System in its responsibility for maintaining orderly conditions in the government securities market and for protecting the pattern of interest rates on these securities is compelled by its policies to provide the reserve funds sought by commercial banks." Ralph A. Young, Statement to Morris Plan Bankers Association, October 22, 1946.

them together to see at all clearly what this country's fourth central bank really is.²⁶

The clearest outline of the new structure I have seen is a description in *The Economist* in a discussion of Australian finance: "In most highly developed modern communities the administration of finance has come

²⁶ "The management of the public debt is bound to have a profound influence on the economy for a long time to come." President Truman, "Budget Message," *New York Times*, January 10, 1945.

"The war has left us with an enormous national debt. This debt affects the life of every man and woman in the country, and it will continue to do so for a long time to come. It will influence the number of jobs open, the wages or incomes people will receive, what and how much they can buy, and what their savings will be worth." Committee on Public Debt Policy, "National Debt Series 1," 1946, p. iii.

"Money management and debt management, as distinguished from fiscal policy which depends largely on Congressional action, are today's Siamese twins of effective and usable power and influence in the hands of those who have executive authority and responsibility. I think it is possible to do something with them as they stand. What we do need not be spectacular nor drastic. It has not been sufficiently recognized, perhaps, that the very size of the public debt and of the bank holdings of the public debt may have made the money market much more sensitive to relatively modest action than was formerly the case." President Allan Sproul, New York Federal Reserve Bank, Address to New Jersey State Bankers Association, December 6, 1946.

"The public debt is an instrument of public policy. It is a means to control the national income and, in conjunction with the tax structure to regulate the distribution of income." Alvin H. Hansen, *Fiscal Policy and Business Cycles* (W. W. Norton, 1941), p. 185.

"Intellectually and practically, we have scarcely begun to exploit the new instrument [debt management]." Henry C. Wallich, "Debt Management as an Instrument of Economic Policy," *American Economic Review*, June, 1946, p. 310.

"The growth of the public debt is bringing to a head a trend which has been underway since the early thirties: the weakening of the rate of interest, both in practice and economic theory, as an instrument for cyclical control of business activity. At the same time, the debt is giving new importance to the interest rate as a factor influencing the distribution of national income, the income of certain groups, and the value of capital assets. In this paper it will be argued that what we have been witnessing is in fact a shift in the main functions of the interest rate. If this be true, we shall have to reorient our thinking, so as to pay less attention to credit stimulation or restriction, by means of low or high rates, and more to the influences of such rates upon the incomes of interest receivers and interest payers and their capital position. In concrete questions of public debt management, the new viewpoint is already becoming apparent." Henry C. Wallich, "The Changing Significance of the Interest Rate," *American Economic Review*, December, 1946, p. 761.

"The only type of quantitative credit control that can be effectively exercised at present and particularly in the immediate future will be through the proper handling of the public debt. Debt management has assumed an importance far greater than the discount policy of the central banks ever had in the past." Haskell P. Wald, *Survey of Current Business*, December, 1945, p. 19.

"Through proper handling of these maturing obligations the Treasury can exert a great influence on the inflationary forces menacing the country as well as on the money market." Institute of International Finance of New York University, "Management of the Public Debt," Bulletin 142, February 18, 1946, p. 17.

"All of us little people talk about our good and bad times, our statistical charts and curves, our business cycles, our full dinner pails and our bread lines, our bear markets and our bull markets, and we make our prophecies or guesses, in ignorance or disregard of the fact that the public money managers largely determine all that, as they make money plentiful and cheap, to finance a war or to stop a depression, or as they may contract credit or make it dear to stop a crazy speculative boom." R. C. Leffingwell, "Managing Our Economy," *Yale Review*, 1945.

"The existence of this debt will be one of the most important facts of the postwar period; and the way in which it is managed will be one of the most important determinants of the character of that period." *Annual Report of the Secretary of the Treasury*, for the fiscal year ended June 30, 1945, p. 5.

to rest on three tiers. First comes the ministry of finance, which determines general policy; next comes the central bank, which administers the policy; finally, there are the commercial banks and specialized institutions speeding the flow of commerce within the limits of general policy determined by the Ministry of Finance and administered by the central bank."²⁷

Something of the fourth central bank's massive and pervasive magnitude is evident from consideration of the mass of contracts which is the debt, and of the great scope of the granite-like inhibitions which have been induced, of the numerous and far-reaching responsibilities which have been passed on to it. Something of it can be seen by the variety of the tools with which it has to work. And something of it can be envisioned by the number of points which its manifold operations touch in economic theory.

Are we members of any of the schools stemming from the quantity theory? The fourth central bank will determine the quantity of money and the convertibility between money and other assets and will influence the velocity of money—and do so with or without deficit financing on the one hand or debt retirement on the other.²⁸

Are we members of any of the Keynesian sects? The fourth central bank will influence and perhaps determine the rate of savings and its quantity, the conditions which influence investment, the effect of liquidity preference, the propensity to consume—and do so with or without deficit financing or debt retirement.²⁹

"Even after meeting all of the other fundamental and numerous requirements for prosperity, we will need very capable hands at the wheels of debt management." Aubrey G. Lanston, Malcolm B. Lees, and Leroy M. Piser, "The Impact of Business Requirements on Interest Rates," *The First Boston Corp.*, December 13, 1946, III-A, pp. 10, 11.

"The vastly increased magnitude of the Treasury Department's public debt operations give its inherent monetary powers new practical importance." Lawrence H. Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, p. 70.

²⁷ *The Economist*, March 17, 1945.

²⁸ "Even though the interest burden can be carried, the more vital question is what the debt has done and is doing in causing inflation or deflation, or both, through its effect on the volume of money. This is the central problem of debt management." Committee on Public Debt Policy, "National Debt Series 1," 1946, p. 12.

²⁹ "Debt management can affect the expenditures of investors, and hence the national income, by inducing or obliging them to change the form of their assets. Whenever the conditions on which debt can be held are changed, or whenever other conditions influencing investment behaviour change, the investor must make a change at several margins. . . ." Henry C. Wallich, "Debt Management as an Instrument of Economic Policy," *American Economic Review*, June, 1946, p. 305.

"By restricting the offerings of obligations attractive to the [life insurance] companies, by limiting their purchases, or by requiring their portfolios to contain a certain proportion of other assets, they could slowly and gently be pushed in the direction of more stimulating uses of their funds." *Ibid.*, p. 307.

"Whereas the [British] debt was formerly an instrument through which funds were siphoned from consumption into savings, so recently it has become, in part at least, an instrument to siphon funds from savings into consumption." Alvin Hansen, *Fiscal Policy and Business Cycles* (W. W. Norton & Company, 1941), pp. 156-157.

Are we members of any of the equilibrium groups? The fourth central bank will greatly influence, if not determine the level of prices and of costs and the relationship between them, the balance of payments, the supply of money in relation to demand—and do so with or without deficit financing or debt retirement.³⁰

Are we of the persuasion that some one specific economic operation spins out the threads of our fate? This fourth central bank will greatly influence if not determine the propensity to consume, the level of construction, the income of agriculture, the functioning of the capital markets, the level and structure of interest rates, the balance of payments, the efficiency of labor.

Do we ascribe economic causation to some other set of forces than those mentioned thus far? I shall be surprised, indeed, if the fourth central bank does not exert a considerable influence upon them.

Policy formulation by the fourth bank will not be made easier by the shrill cacophony of the economists, both professional and amateur, regarding virtually every basic consideration. Our various causation sects urge different premises for policy, and each is raucously critical of the others. The role of interest rates is the subject of most extreme contentions: low rates stimulate investment,³¹ rates are not an im-

"Fiscal policy is the most important single instrument through which the government may influence economic conditions." M. S. Eccles, "The Postwar Price Problem—Inflation or Deflation," Address to the National Industrial Conference Board, November 16, 1944.

"As long as it were a process of refunding, whereby maturing debt held by banks and other institutions were redeemed out of cash supplied by fresh individual purchases, there would be no net effect on the funds available for investment, although the direction of the use of the funds released through such redemption could be different than it would have been in the hands of the original savers." Harley L. Lutz, *The Tax Review*, September, 1944.

³⁰ "The fundamental condition of full employment and capacity operation of the economic system is a state of balance, in which various prices, wages and other costs, profits, incomes and other elements are in such equitable relationship that all occupations and population groups can exchange their products on terms that will clear the markets." *National City Bank Letter*, December, 1944.

³¹ For the view that low rates stimulate investment, see several of the items under footnote 4. Also: "A low rate of interest can be a material stimulus to investment in some important areas where maintenance and depreciation are low, risks are moderate and interest is a really substantial part of the cost incurred on account of an investment of capital. This is pre-eminently true of hydroelectric installations and is broadly true of housing." John Maurice Clark, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 110. But see the counter statement by Clark in note following.

"... if the expanded money supply should induce further reductions in long-term interest rates, it would have a stimulating effect on investment expenditures and would indirectly bolster consumption." "The Expanded Money Supply and Economic Activity," *Survey of Current Business*, May, 1946.

Transition policy should include "maintenance of low rates of interest to encourage new investment, including housing." M. S. Eccles, "The Postwar Price Problem—Inflation or Deflation," Address to National Industrial Conference Board, November 16, 1944.

"Over the years a low cost of money to borrowers on long-term should tend to promote increased employment by encouraging capital outlays in both old and new enterprises." *Annual Report, Board of Governors of Federal Reserve System*, 1943.

"The fact that the turning point from boom to depression is preceded by a high level of interest rates, and a turning point from depression to recovery by a low level, seems

portant consideration in investment decision,³² high rates stimulate investment;³³ low rates stimulate saving,³⁴ rates are not important in the motivation of saving,³⁵ high rates stimulate saving.³⁶ Bank credit

to indicate that situations exist in which the interest rate does exert an influence on the total volume of investment. Though we are again of course not justified in drawing the conclusion *post hoc propter hoc*, it can plausibly be argued that the high (low) level of the interest rate is at least a contributory factor in inducing the recession (revival).³⁷ Friederich A. Lutz, "The Interest Rate and Investment in a Dynamic Economy," *American Economic Review*, December, 1945, p. 828.

³² "... both theoretical analysis and practical case studies indicate that the volume of real investment made by business is but little affected by the interest rate. All manner of other considerations dominate. . . ." Alvin H. Hansen, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 255.

"Loans at low interest, increases in depreciation allowances, and so forth, may help to stabilize private investment, but they alone cannot raise it sufficiently to fill a deflationary gap of the dimensions which we have experienced in the past." Sir William H. Beveridge, *Full Employment in a Free Society* (George Allen & Unwin, 1944), p. 184.

"But in the general field of industry and trade, low interest rates cannot accomplish as much as many economic theorists give them credit for. Interest alone is a minor part of the total cost of sacrifice involved in a capital outlay, especially in a dynamic industry where equipment gets obsolete long before it is worn out and the allowances for obsolescence alone dwarfs the element of interest." John Maurice Clark, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 111. But see also statement by Clark in note preceding.

³³ "The underlying cause for the low interest rates of the thirties—more important than all the other causes combined—was the relative absence of competing businessmen in the capital markets for the savings of the nation. No doubt there were many contributing causes for this absence, but the bottom one was the fact that businessmen saw no use to which they could put additional capital without incurring risks which seemed to them too great to bear for the chance of gain that might ensue therefrom." Claude L. Benner, "The Outlook for the Interest Rate," *Commercial and Financial Chronicle*, April 27, 1944.

"The rates of 2% on ten-year bonds, and 2.5% on twenty-year bonds are simply too low to attract investors." B. M. Anderson, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 48.

³⁴ Stephen M. Foster, discussions with the writer.

"For while low rates undoubtedly hamper savings by reducing the income on past saving, they do, on the other hand, put additional pressure to save on prospective annuitants, aiming at a given retirement income. The net result may be either way [p. 776]. . . . We therefore find confirmed the popular view that a rise in the interest rate increases the propensity to save. However, it is important to note that, in contrast to the popular view, this is not because everybody's propensity to save is increased. The reason is, rather, that higher interest rates shift income from those who save little to those who save much. From this second conclusion follows: For the 'little man' who inhabits the lower brackets, saving is made harder, not easier, by higher interest rates. Higher rates do give him a better return on his money, but what they take away from him is more. Since the better interest return fails to make up for his reduced income, the net result probably is lower saving for the 'little man.'" Henry C. Wallich, "The Changing Significance of the Interest Rate," *American Economic Review*, December, 1946, p. 777.

³⁵ "Money rates, therefore, will not exercise any influence on the savings of the people." Marcus Nadler, "Are Money Rates Now Artificially Low," *Finance*, October 10 and 25, 1945.

"It is doubtful whether the rate of interest exercises any appreciable influence in the thrift habits of the small saver [p. 14]. . . . One may, therefore, conclude that under present conditions the interest rate has little effect, if any, on the savings of the nation [p. 15]."³⁶ Haskell P. Wald, *Survey of Current Business*, December, 1945.

"Certainly the incentive of higher yield will not prove so effective as in the past, for the small saver is much less interested in the return on his investment than its capital value."³⁷ "Future Savings," *The Economist*, December 16, 1944.

³⁸ "If the Treasury were to offer a long-term bond at a rate somewhat higher than the prevailing rate, designed to take up the liquid savings of the public, both directly and through savings institutions, it would in my judgment have the following effects: (1) It

can appropriately be used as capital,³⁷ such use is inappropriate. The rate of savings may be expected to decline,³⁸ to remain stable,³⁹ to rise.⁴⁰ There is little need to extend the catalogue of evidence that the analytical tools of the profession have not been developed far enough to bring

would encourage saving rather than spending at a time when there is an excess of demand in the commodity and real estate markets. There is little reason to save when interest rates are extremely low and the currency is depreciating." L. Douglas Meredith, Testimony before Senate Committee on Banking and Currency, December 5, 1945.

"The low rate also discourages savings and has a serious impact upon all life insurance, pension and savings funds." M. S. Eccles, *New York Times*, May 24, 1946.

"Low interest rates are usually thought of as stimuli to investment, but they might have as much effect in reducing long run net savings, if they become low enough to drive the ordinary middle class saver into buying annuities instead of holding his principal intact and spending only the income." John Maurice Clark, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 96.

³⁷ "New bank credit constitutes a fifth source of capital, safe enough when cautiously used and when kept in reasonable relation to the growth of the normal sources of capital and the growth of production in the country, but dangerous in the extreme when used to excess. . . ." B. M. Anderson, *Financing American Prosperity* (Twentieth Century Fund, 1945), pp. 44-45.

"The banks themselves can create capital. . . ." Marcus Nadler, *Finance*, October 10 and 25, 1945.

"Experience has shown that the commercial banks are in a position to furnish not only short-term credit to industry and trade, but also long-term capital." Institute of International Finance of New York University, "Money Rates in the Postwar Period," Bulletin 141, December 17, 1945.

" . . . the credit currency created by the banking system provided funds with which to construct new capital without waiting for the accumulation of money savings. It was demonstrated that bank credit was, in fact, extensively employed in financing long term capital development and that the tempo of economic expansion had thus been accelerated." Harold G. Moulton, *The New Philosophy of Public Debt* (The Brookings Institution, 1943), p. 50.

³⁸ " . . . the severely progressive federal income tax rates in prospect for the postwar period will accomplish a drastic curtailment of saving [pp. 201-202]. . . . Whether such low rates also diminish the volume of saving is a controversial question we shall not argue here, though we believe the answer must be in the affirmative [p. 212]. . . . a strong presumption in favor of a higher propensity to consume in the future than we have had in the past [p. 213]." George Terborgh, *The Bogey of Economic Maturity* (Machinery and Allied Products Institute, 1945).

"The propensity to save has been falling for some time, and the war and conditions created by the war are likely to make it fall even more." S. H. Slichter, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 334. See, however, following note.

"The greater the national debt the greater is the quantity of private wealth. The reason for this is simply that for every dollar of debt owed by the government there is a private creditor who owns the government obligations (possibly through a corporation in which he has shares) and who regards these obligations as part of his private fortune. The greater the private fortunes the less is the incentive to add to them by saving out of current income. As current saving is thus discouraged by the great accumulation of past savings, spending out of current incomes increases (since spending is the only alternative to saving income). This increase in private spending makes it less necessary for the government to undertake deficit financing to keep total spending at the level which provides full employment. When the government debt has become so great that private spending is enough to provide the total spending needed for full employment, there is no need for any deficit financing by the government, the budget is balanced and the national debt automatically stops growing. The size of this equilibrium level of debt depends on many things. . . . My guess is that it is between 100 and 300 billion dollars." Abba P. Lerner, "Functional Finance and the Federal Debt," *International Postwar Problems*, October, 1945, pp. 543-544.

"A society rich in liquid assets will certainly tend to spend a larger proportion of its current income." Alvin H. Hansen, "Must We Have Postwar Inflation," *Commercial and Financial Chronicle*, November 1, 1945.

agreement even among the closest students, nor to argue farther that the job of the fourth bank is not made easier by this lack of development and resulting counsel of babel.

The statutory position of the fourth bank is also vastly confused. Powers and authorizations are spread about in a thoroughly haphazard manner, some are lavish in their scope while some, I suspect, will be found quite niggardly.

In view of this situation, the fourth bank, like Crusoe, will need to exercise a great amount indeed of ingenuity, and, like him too, quite a bit of expediency. But, then, ingenuity and expediency are requirements imposed upon any human organization, young or old; so the fourth bank is at no greater disadvantage than any other in what Dr. Conant has called "the delightful chaos of American democracy."⁴¹

The fourth bank will have to beware of the trap which Mill observed when he said: "Institutions, books, education, society all go on training human beings for the old, long after the new has come; much more when it is only coming,"⁴² which the *Economist* called "piety to a principle learned in youth but the reason for which has been forgotten",⁴³ and which Dr. Goldenweiser described when he said: "There

"With this backlog of savings, we reasoned, individuals would spend a larger proportion of their incomes than they did before the war. In order to check our reasoning in this matter, we took a look at the situation that developed after the first World War. It was obvious that the spending and saving habits of individuals changed substantially at that time. Despite the fact that the increase in their liquid savings was not nearly so large as it was during the second World War, individuals subsequently spent a considerably larger proportion of their current income. We concluded, therefore, that a similar but larger shift in spending and saving habits will occur over the next five years. Actually we guessed that out of any particular amount of disposable income individuals will save only half as much as they would have saved before the war. These aggregate figures, of course, reflect the combined spending and saving habits of millions of individuals. Another way of looking at this conclusion is that many individuals, particularly those that spend all or nearly all of their current income, will spend no larger proportion than they did before, but will utilize some of their accumulated saving. No matter from what point this question is examined, it seems reasonable to assume that consumer spending will aggregate a larger percentage of disposable income than was the case before the war." Aubrey G. Lanston, Malcolm B. Lees, and Leroy M. Piser, "The Impact of Business Requirements on Interest Rates," *The First Boston Corporation*, December 13, 1946, III-A, p. 6.

⁴¹ "The safest assumption is that the proportion of individual incomes saved will continue to remain about the same. . . ." S. H. Slichter, *Financing American Prosperity* (Twentieth Century Fund, 1945), p. 300. But see also preceding footnote.

"... the historical evidence points to a high degree of stability in the relation of consumption to income." Alan R. Sweezy, "The Problem of Full Employment," *American Economic Review*, May, 1946, p. 295.

⁴² "Even more certain is the generalization that with higher incomes, some fraction of the increase goes into savings so that the total of savings increases absolutely with income, whether or not it does so in less or greater proportion." Paul A. Samuelson, *Postwar Economic Problems* (McGraw-Hill, 1943), pp. 31-32.

⁴³ James B. Conant, "America Remakes the University," *The Atlantic Monthly*, May, 1946.

⁴⁴ John Stuart Mill, *The Subjection of Women* (edition by Frederick A. Stokes, 1911), p. 96.

⁴⁵ *The Economist*, March 2, 1944 (Centenary Issue), p. 62.

is real danger in experience. It often results in narrowing a public man's approach to national problems to considerations with which he has become familiar in a particular and often not a representative set of circumstances."⁴⁴ But at the same time the fourth bank should not forget Lord Keynes's caution to the moderns in his last statement: "I find myself moved, not for the first time, to remind contemporary economists that the classical teaching embodied some permanent truths of great significance. . . ."⁴⁵ Nor should it ignore Churchill's injunction that "it is only from the past that one can judge the future."⁴⁶

At least the fourth bank will not lack a specific objective of operations as the third bank seems almost throughout its life to have wanted. The objective is to maximize and regularize real income at full employment. If this definition does not conform to consistency, the bank will have to worry about that deficiency.

I have said earlier that the mass of contracts we call the debt can be validated, or that they can be defaulted by inflation and/or retrogression in the standard of living. To say that the fourth bank can satisfy or fail in its responsibilities is but to say the same thing in different words. The rewards to society for its creation of the fourth bank can, if the bank succeeds, be cornucopian, but the sanctions, if it fails, can be brutal and appalling.

VI

We shall all, of course, interpret the creation of the fourth bank in terms of personal economic predilection. Some will doubtless view it as akin to the monster created by Mrs. Mary Shelly, while others will probably be confident that it will be to the annals of economics what Mrs. Ann Radcliffe was to the English novel.⁴⁷

For myself, the classic comments of Lord Macaulay regarding the debt of Britain seem very relevant: "Those who so confidently predicted that she [England] must sink, first under a debt of fifty millions, then under a debt of eighty millions, then under a debt of a hundred and forty millions, then under a debt of two hundred and forty millions, and lastly under a debt of eight hundred millions, were beyond all doubt under a twofold mistake. They greatly overrated the pressure of the burden: they greatly underrated the strength by which the burden was to be borne."⁴⁸ So, too, does another passage from Lord Keynes's testament: ". . . the best policy is to act on the optimistic hypothesis

⁴⁴ Presidential Address, American Statistical Association, December 9, 1943.

⁴⁵ *Economic Journal*, June, 1946, p. 185.

⁴⁶ *New York Times*, May 14, 1945.

⁴⁷ Wilbur L. Cross, *The Development of the English Novel* (Macmillan, 1906).

⁴⁸ Lord Macaulay, *History of England* (1855) (ed. of 1906; E. P. Dutton and J. M. Dint & Sons), Vol. 3, pp. 168, 169.

until it has been proved wrong. We shall do well not to fear the future too much."⁴⁹

The hypothesis that we do not necessarily need to view with great alarm the developments here recounted is based in turn on another hypothesis. This is that the fourth central bank: can and will extend analysis of the facts about this mass of contracts to illuminate vast areas now hidden from sight by lack of information; that it can and will utilize its instruments to deal with long range conditions as well as those cyclical and day to day; that it can and will develop usable criteria to replace those of the gold standard which have customarily guided central banks in the past; that, in short, it can and will discover and can and will develop from its mass of tools and materials informational and operational techniques useful to society in its exercise of the "certain inalienable rights" including "life, liberty, and the pursuit of happiness."

⁴⁹ "Balance of Payments of the United States," *Economic Journal*, June, 1946.

THE PUBLIC DEBT AND NATIONAL INCOME

By ARYNESS JOY WICKENS

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I approach the problem posed by national income and the public debt with great misgiving because I have given little more thought than the average citizen to its economic implications.

I hope that you will bear with me if I treat some of these issues with a simplicity which may appear to be mere naïveté, and approach this problem from the standpoint of one whose principal interest has been the course of prices, employment, and the general business cycle.

My principal emphasis today is, first, upon the national income and what its probable future level, in dollar terms, implies for those unhappy people whose task it will be to manage a debt of almost uncomprehended size in a period when taxation will not be popular, however sure it may be. Second, I should like to refer briefly to the distribution of national income and some of its consequences for the handling of the debt. With respect to debt management itself, I must defer to the fiscal and monetary experts.

The facts of the federal public debt in relation to national income are in themselves fairly simple. (I dismiss state and local debts because they have diminished rather than increased during the war period.)

The total debt of the federal government in October, 1946, was 263½ billion dollars, all but 1 billion of which was interest bearing.¹ This includes all those bonds, notes, certificates of indebtedness, and special issues commonly classified as "public debt" by the Treasury Department, but not guaranteed securities. It embraces all indebtedness in that category which the Congress has, by statute, limited to a total of 275 billions.²

At this point I wish to direct my remarks to this category of the federal public debt, and later to take account of the implications of Mr. Woodward's point that our federal financial obligations far exceed our contractual debts in this formal sense—a point of view with which I entirely agree. But the debt problem is difficult enough without compounding trouble at this point.

To dramatize the growth of the debt and to help you to appreciate the shock which it gives any layman who contemplates it, let us go back over three decades.

The total debt is now 263½ billion dollars.

Thirty years ago, before we entered World War I—in early 1917—it was only a little over 1 billion.

¹ *Treasury Bulletin* (U. S. Treasury Department), December, 1946. p. 26.

² *Op. cit.*, p. 25.

The peak of the debt after World War I was reached in August, 1919, at a mere 26.6 billion dollars, about one-tenth of this war's debt.

In 1930, after a decade of "prosperity" and repayment of the debt of World War I, it was 16 billions.

In the summer of 1939, when the war broke out in Europe, our debt was 40 billion dollars, after nearly a decade of net deficit financing. Thus the debt multiplied over sixfold in the brief period of six years after the war broke out in Europe.

In summary: a debt of 1 billion dollars in 1917; over 260 billions in 1946; a total of 26 billions as the legacy of World War I; a tenfold total of 260 billions as the legacy of World War II.

The extent to which the debt constitutes a burden has nowhere been so graphically set forth as in the first paper of the Committee on Public Debt Policy entitled, *Our National Debt After Great Wars*, written by the late General Leonard Ayres.³ Today the debt amounts to slightly less than \$2,000 for each man, woman, and child in the United States, as contrasted with \$240 in 1920, and about \$78 at the close of the Civil War, a more burdensome debt for our then poor country, General Ayres concludes, than that which followed World War I.

But our national income, too, has grown during the war years—although not so astronomically as the debt. For the year 1946 as a whole it is estimated at 164 billion dollars⁴ and, currently, it is at an annual rate of 174 billions. This is about 145 per cent higher than the 71 billions of 1939.

Thus today the debt is 150 per cent of our current national income. At its height in 1919 it was about 45 per cent of the national income—a fraction, not a multiple.⁵

There is one further fact to be considered, one which lightens the burden of this debt: the unusually low interest rate which it bears. Currently that rate averages slightly over 2 per cent⁶ in contrast with over 4¼ in 1920-21.⁷ The computed annual charge on the public debt in the last quarter of 1946 was at the rate of 5.3 billion dollars, and for the coming fiscal year (1947-48), was estimated at 5 billions in the President's annual budget message.⁸

Thus, unless the debt is rapidly retired, we must look forward to a

³ *Our National Debt After Great Wars*, "National Debt Series 1" (New York: Committee on Public Debt Policy, 1946).

⁴ *The Economic Report of the President* transmitted to the Congress, January 8, 1947.

⁵ *Our National Debt After Great Wars*, "National Debt Series 1," p. 4.

⁶ *Treasury Bulletin*, p. 24.

⁷ *Our National Debt After Great Wars*, "National Debt Series 1," p. 10.

⁸ As Professor Shoup has pointed out, the total annual interest charge on the public debt (assuming no retirement) will increase as the years go by because of the larger payments required on savings bonds which are an important component of the total issue, and also, in all probability, because of refunding some short-term certificates of indebtedness which carry the lowest rates into longer-term obligations bearing somewhat higher rates.

minimum of 5 billion dollars annual charge upon us as taxpayers for current interest charges alone and even this total may increase. This is not far from the total amount spent for the entire activity of the federal government in any year prior to 1934 and nearly half as large as the annual budget during the thirties.

It is this 5 billion dollar charge which constitutes a first charge upon national revenues. At present levels, it is a little under 3 per cent of the total national income. This is nearly double the share of the national income which the service on the public debt of 1920 required, even at more than double the present interest rates. Although, looking back over our own history, the relative increase in the total debt is very great, we may perhaps take some comfort from the fact that other countries, even in peacetime, have borne an even larger burden. The United Kingdom, in 1939, before the war, devoted 4.5 per cent of its national income to service of its public debt—in 1944, 4.8 per cent.⁹

If the interest charge on the public debt alone constituted the measure of the debt burden, and if we had reason to believe that national income would be sustained at current dollar levels, we could perhaps contemplate the future without undue concern. But that is *not* the limit of the debt problem per se. The American tradition is to pay off our debts, both private and public, and current discussions indicate that that tradition is still strong today. Thus debt retirement, too, must be taken into account. The amount cannot be estimated; it will certainly vary from year to year with the economic situation, and, presumably, be largest in periods of high national income and large tax revenues. But here, too, new magnitudes must be comprehended. With a debt of 260 billion dollars, the net repayment rate of the twenties—when the late President Calvin Coolidge repaid 1 or 2 billion a year—will scarcely scratch the surface.

But debt retirement is not all. There are other obligations of the federal government, which, as Mr. Woodward has pointed out, are just as inescapable, though they may not be in the form of fixed contracts. They include commitments for agricultural support prices, which are an immediate problem; certain social security payments which will eventually be larger, and the vast array of contingent financial guarantees of bank and building and loan association deposits, and of insured mortgages. He did not mention, though he might well have done so, a group of obligations of a nonfinancial character—we might call them moral obligations—that are large and equally compelling, although they will vary in amount from year to year. They include veterans' payments, the support of a much larger program than prewar for the Army,

⁹ *You and Your Nation's Debt* (New York: National Association of Manufacturers, 1946), p. 7.

Navy, and Air Corps; and other expenditures that arise from our new international obligations. Some of these obligations are larger in amount and may, in the long run, constitute an even more serious problem than the service of the debt; for interest may be reduced if the debt is retired, while some of these other obligations may increase.

All told, as a nation, we have obligated ourselves to pay very much larger sums than 5 or 10 billions of dollars which the federal debt alone implies. The President has proposed a federal budget of 37 billions in expenditures, with comparatively little provision for debt retirement for the coming fiscal year, out of a national income apparently assumed to be 175 to 180 billions.¹⁰ Thus, these proposed budget expenditures are about 20 per cent of national income, and of this, the debt service would account for only about 3 per cent. There are, in addition, rather inflexible payments which the state and local governments must make for police, education, and other purposes, totaling about 11 billion dollars. This total is close to 25 per cent of our unusually high national income. The magnitude of this total raises the two very broad questions: first, the effect of the high taxes which must be raised to support this debt upon the enterprise of individuals and businesses and whether they will strive to produce and earn more, and, second, the whole question of the effect upon the economy of having such a very large and important share of the national income channelling through and under the control of government—federal, state, and local. But both of these questions go far beyond the scope of this paper.

The debt problem, however, is by no means a short-run matter; we must look far beyond the next year or two. In the long run, the management of the debt may well turn on the future of national income. There are students of the debt problem who assume that the current dollar level of national income will be maintained beyond the next year or two. This is based apparently upon anticipation of inflated prices resulting from the gigantic volume of money and of credit potential at the disposal of industry and individuals. Close study of the price aspect of the situation alone indicates, however, that the price level is almost certain eventually to fall. It has done so after every war. More than that, credit will not necessarily be used to bid for scarce goods unless business can be sure that they can be marketed at those prices.

I do not wish to venture a guess today on the precisé level at which either national income or prices will settle. It has generally been true that the first downward move following an inflationary period is fairly sharp. Only after a considerable period of time have wholesale prices returned to their low prewar levels and consumers' prices never did so

¹⁰ Derived from the total of gross national product of about \$215 billion apparently assumed in the *Economic Report of the President*.

after World War I. Circumstances today differ in important respects from the earlier postwar periods, most importantly with respect to the available volume of purchasing power. Because of that volume of purchasing power and the large credit base, prices may settle at a relatively higher level than prior to this war. But few observers believe that the present price level can hold.

It may be worth while to consider in somewhat more detail the current level of prices and what it implies for the future. Prices at wholesale are now about 20 per cent below their 1920 peak, with a rise of about 33 per cent since V-J Day and 24 per cent since July 1, 1946, when price controls first lapsed. The general level is up 85 per cent from the summer of 1939. This is a somewhat smaller rise than in the period of the first World War, but it is sufficiently great to form the familiar pattern of price inflation which has always accompanied great wars. I am astonished at people who inquire anxiously, "Are we going to have inflation?" The answer is: "We have it. It is here now."

This war, like all wars, has distorted the price structure to an extraordinary degree. Some prices have doubled or trebled, others are up 10, 20, or 30 per cent. Prices of farm products, moving from extremely low levels in the summer of 1939, had advanced 179 per cent at their peak in the third week of December, 1946, while prices of all commodities other than farm and food products were up about 55 per cent in the second week of January (1947) and have been rising steadily for a year and a half.

However, most students of the price situation are of the opinion that we are at or near the peak of prices. Already some important speculative prices have broken; the stock market is down; prices of luxury goods have weakened; city real estate values have apparently ceased to rise.

Nevertheless, few observers expect such a precipitous and widespread drop in prices as that which occurred in the spring and summer of 1920, first, because support prices are provided for important agricultural products for two crop years after the cessation of hostilities, at 90 per cent or more of parity; because certain speculative prices, such as silk, some of the metals, and coffee, that led the general break in 1920 are relatively not so high now.

Moreover, a more important segment of the economy today is governed by "sticky" or "institutionalized" prices which do not move up rapidly, but once up, remain there for an extended period. There is one further factor which will restrain price reductions; namely, the current higher levels of wage rates. Wages are an important component of costs. They, too, are sticky, and now, with the rapid rise in living costs in the past six months, workers will use all their bargaining power

to secure still higher wages and to resist any attempts at reduction.

The *Economic Report of the President*, centering upon the prospects for continued full employment and concerned with real income rather than money income, expresses the general opinion that high prices today, following the rapid rise of the last six months, constitute an unfavorable factor for the outlook in 1947. The *Report* indicates that if the economic budget of the country is to be balanced, and production, consumption, and employment are to be sustained in slightly larger volume next year, prices must be reduced. The *Report* recommends:

Business should reduce prices wherever possible in order to bring about the necessary increase in consumer purchasing power to bolster their markets. Price reductions are especially needed in the case of goods such as many articles of food, clothing, house-furnishings, and building materials, whose prices have risen out of line. If business makes these reductions in a timely and orderly way, it will help sustain markets rather than destroy them.

Farmers must realize that last year's exceptional farm prices will fall somewhat as world food supplies increase and as consumers find a more ample supply of durable goods to purchase. Existing price supports afford protection against a severe price decline.¹¹

In the discussion of public debt in recent economic journals I find frequent references to the fact that the burden of the public debt will be an influence leading toward a "price policy" of sustained high prices. It is time to face the fact that if the federal government and the American people have a "price policy" today, it is to let prices find their own levels in the market. As the *Economic Report of the President* states:

Removal of emergency price and wage controls has restored the main responsibility for prices and wages to business, labor, farmers, and consumers. The government can point out dangers seen from the perspective of the whole economy, but the corrective must largely be applied by others.¹²

Price controls have been eliminated except for those on sugar and rice. In any event, these controls were designed to prevent rising prices, not to put a floor under prices.

Support prices are provided only for agricultural products. In other basic industries there is now no mechanism by which the federal government can directly affect specific prices, as such, except by its own purchases of supplies for peacetime requirements. Even the legislation which put a floor under prices of bituminous coal in the interests of minimum wages has lapsed. In a period such as the present, it would require a major change in thinking to promulgate quickly a program of support prices or some similar mechanism that was generally applicable.

When prices fall, the dollar total of national income will fall. It is then that we will really feel the pinch of the national debt. The nation, like a family, will find then what millions of farm families, for example,

¹¹ *The Economic Report of the President*, p. 20.

found in the period of the low prices for farm products in the twenties. The burden of debts contracted at high prices—payments on mortgages, on installments for equipment and cars bought in prosperous times, on insurance premiums and even the cost of supporting old or ill members of the family—meant not only a sacrifice of education, of opportunities, but of the everyday necessities of food and clothing. For a nation, heavy fixed obligations for the future mean, in a period of smaller dollar incomes, that many governmental services that go to make up the national standard of living may be impossible unless a way is found to handle the debt.

Suppose, to take an extreme case for the sake of illustration, that the national income declined to 100 billion dollars. (As some of you may recall, such a large total as this seemed impossible of achievement even in the most optimistic period of the thirties, when the highest total fell 20 billions short of that mark.) A 5 billion dollar debt service would mean 5 per cent of a national income of 100 billions, or about the same relative burden as in the United Kingdom in 1944. Those who know the sacrifices of the citizens of the United Kingdom who paid taxes to sustain a debt of such proportions and still to maintain their social services would certainly not welcome such a tax burden here—but it has been done in Anglo-Saxon countries, in our times.

There is finally the question which the changing distribution of the national income raised for tax experts who must raise the revenues to support this debt and its retirement. For the first eight months of this year about 65 per cent of the national income went into all types of wages and salaries. This is a decline from the peak of 71 per cent in the war years. But the decline is almost wholly in wages of employees of the federal government and pay of the armed forces, which yield little in the way of taxes in any case. There has also been a reduction in the share which manufacturing pay rolls represent, but a much more than offsetting rise in other private industries such as construction, trade, and services.

This means essentially that the government must continue to look to income taxes on relatively small incomes, levied upon a group of people who are not large holders of the public debt and will in turn receive little in interest. The other components of the national income which present somewhat different problems of revenues are, first, agriculture, whose net realized income accounts for only $8\frac{1}{2}$ per cent of the national total. Here the share has gone up with the rise in prices from about 6 per cent before the war but may fall somewhat with declining prices.

There has been, of course, a marked decline in the receipts from dividends and interest combined from about $12\frac{1}{2}$ per cent of the

national income before the war to about 8 per cent at the present time. This results in large part from the lowered return from interest. Dividends are higher. Thus, taxes on this group cannot be counted upon to contribute the same relative share of the national income that they did before the war.

There is finally that large category which the Department of Commerce refers to as "nonagricultural entrepreneurial net income and net rents and royalties." Here there are three divergent segments that have moved in different directions. Business profits have gone up, and so long as the level of activity remains high, they will continue to yield sizable revenues. The share represented by rents must have declined rather sharply in view of the comparative stability of home rentals which form a large part of the total. Commercial rentals, of course, have been unregulated and have advanced by very large amounts. Nonetheless, this segment of the national income which is generally taxed by state and local authorities is bearing a proportionately heavier share of the tax burden and can provide little to meet higher local budgets.

Thus, the tax expert faced with the necessity for raising much larger sums than before the war to finance the heavy and inflexible obligations of governments, federal, state, and local, must probably accustom himself to the fact that income taxes in the lower brackets must be a continuing feature of our tax structure, though rates might be somewhat lower than at present.

At this point, having stated the problem and asked some questions, I defer to experts in taxation and debt management. The problem is one of ways and means. It is clear that this debt weighs heavily when added to other necessary expenditures.

So let me ask one more question: Can a way be found, consistent with our tradition of not repudiating our debts, to integrate the debt into our banking capital structure—in such a way as Great Britain did so long ago? The Bank of England was founded on the British public debt. Our own national banks absorbed, in their note structure, part of the Civil War debt. Can we, thus, not devise a way to demonetize and immobilize an important part of our debt and eliminate the interest on it—and the worry and controversy—as our forefathers did? That is the problem of those who manage the debt.

DISCUSSION

LAWRENCE H. SELTZER: In reviewing Mr. Woodward's attractively phrased and well-spoken discussion of the relations between the public debt and our social institutions, I find it hard to tell just what troubles him most. He seems about equally awe-struck by three sets of thoughts. The first is that the Treasury has various specific and contingent obligations that are not a part of the formal public debt. But most individuals and business enterprises have similar unclassified liabilities—the amounts that will be needed for your children's education, for example. Mr. Woodward mentions such items as social security commitments, commitments to make future loans, etc. Now one can go to any lengths he finds useful in this direction. If, for example, you feel that our national defense is bound to require an outlay of 5 billion dollars a year for the indefinite future, you can argue, if you like, that we should capitalize this liability, say at 2 per cent, and thus add 250 billions to the public debt. By doing similarly with other recurring and more or less unavoidable items in the budget and by refraining from thinking of future revenues, you can get into any state of despair you choose. But Mr. Woodward does not indicate what other use he would make of this thought. If he is primarily interested in calling attention to the sharp elevation in the level of our total annual budgetary requirements as the result of the war, and of social security, aids to housing and similar governmental activities, he would do well to recognize that the public debt as such accounts for only a relatively small fraction of the total—less than one-seventh in the President's most recent budget.

Mr. Woodward's second thought is that the influence of the debt upon governmental policies will have baneful effects upon all our principal social institutions; and his third, that the Treasury has become a maker—he thinks the principal maker—of monetary policy.

His paper does not appear to be a call to action of any kind. For the most part it is rather a recitation of various direct and devious ways in which the family, the church, our economic organization, and the state will be inescapably corroded or distorted by the demands of a great public debt. The prevailing tone is one of doom. There is no proposal for forestalling these influences, no suggestion that we oppose them; there is only resignation before the inevitable, touched with lament. Although he makes a lame profession of optimism at the very end, and winds up with a few prayers, Mr. Woodward mainly tells us that our cherished institutions are to be helpless victims of the blighting influence of the debt.

Now none of us here is in favor of the debt. But we cannot wish it away. Must it really dominate our foreseeable future?

In much of his discussion, I think Mr. Woodward is guilty of what the late Professor Charles Horton Cooley called the "illusion of centrality."¹ Professor Cooley said that if you are familiar with any one factor of life, it presents itself to you as a center from which influence radiates in all directions, somewhat in the same way as the trees in an orchard will appear to radiate

¹ *Social Process* (New York: Charles Scribner's Sons, 1920), p. 50ff.

from any point where you happen to stand. It is for this reason, I think, that Ellsworth Huntington sees all human culture as the product of geography. The view that any of us gets of human life is profoundly influenced by the particular window through which we see it. Mr. Woodward's window lately has been the public debt.

Now the public debt is doubtless of enormous importance in a restricted area. But in the larger world it must compete for influence with a great many other powerful forces. Undergraduates at my university, as at yours, are arranging their extracurricular activities, courting the girls, and planning their careers with little thought of the public debt. Thousands of scientists and inventors are now engaged on countless projects in laboratories the world over equally oblivious of the public debt. Their labors, spiced with luck, may have the power to transform our world far beyond the power of the public debt. The same is true of possible developments in the realm of ideas, in business organization, and in political relations.

Even in the narrower realm in which the public debt looms large, there are important rival forces competing with it for power. It is here that I find the biggest gap in Mr. Woodward's analysis. I take no great issue in detail with his recital of the various influences or inhibitions, as he terms them, likely to emanate from the debt, though I think his list is incomplete and one-sided. But I miss a discussion, no less important, of the character and strength of the various other interests that will influence the authorities in their management of the debt. Mr. Woodward sees only the influence of the debt upon our social institutions. He ignores the reciprocal influence of the latter upon our management of the debt.

As I read the history of this and other countries, I find no dominating single-minded devotion to the objective of minimizing the direct burden of a great public debt. The established institutions of society, including our banking and investment organizations and others of our traditional ways of doing things, always have a large hand, and properly so, in shaping debt and monetary policy. We did not finance World War II by printing paper money or by borrowing at no interest cost from the Reserve banks or even by selling short-term, low interest obligations exclusively. A program of compartmentalizing the public debt was deliberately undertaken in recognition of the existing institutional situation, of the broader needs of our economy, and of the varying needs of different classes of investors. Life insurance companies were not forced to subsist on three months' Treasury bills yielding $\frac{3}{8}$ of one per cent. The commercial banks were not asked to buy thirty-year bonds. The War Savings Bonds, yielding 2.9 per cent in ten years, and redeemable on demand after sixty days, were palpably not designed primarily to reduce interest costs. The Treasury plainly recognized and acted upon other considerations as well as those of minimizing the direct burden of the public debt. I see no reason to doubt that this will also be the case in the future.

A curious implication in Mr. Woodward's discussion is that the government—particularly the Treasury Department—must be presumed to possess not only the single-minded purpose, but also all the knowledge, skills, and tools

it needs to insure the kind of debt management he fears. I find it curious because so often the very persons who are readiest to contend that a democratic government possesses only limited powers to produce specific *good* results by deliberate management, are equally quick to credit it with unlimited powers to achieve planned results that they consider bad.

Yet there are clear reasons why the power of a democratic government to achieve very precise planned results is limited in both directions. Let me note a few of them. Even in the restricted field of interest rates the forces that must be managed are more than mechanical ones such as the volume of excess reserves. The attitudes of bankers, businessmen, and investors also count for much, and these are much less subject to management. The techniques at the disposal of the authorities do not cover the whole field. The riskier customer loans and the interest rates implicit in stock prices, for example, are not highly responsive to monetary policy. And the techniques are apt to be imperfect even in the parts they cover. And, finally, among other reasons, the authorities are usually handicapped in using even their available techniques fully because they are concerned for the secondary or incidental effects of their actions upon particular institutions or upon competing objectives. That is, they are properly far from single minded.

Some of the limitations of the monetary authorities even in their technical sphere and their disposition to follow broader objectives than Mr. Woodward allows for may be illustrated by reference to our monetary experiences of the middle and late thirties.

We have all heard or read many statements to the effect that the substantial decline of interest rates in the United States after 1933 was brought about deliberately by the government through artificial intervention in and control of the money markets. Yet as I interpret the record, the most that can be said for the government's role is that it did not arrest a decline that had its origin and impetus in outside forces.

Did the Federal Reserve banks add anything to member banks reserves to foster declining interest rates? No. The total amount of federal bank credit outstanding at the end of 1939 was about 100 million dollars less than at the end of 1933, and the maximum amount outstanding at any time during the intervening period was only 200 millions more than it had been at the end of 1933.²

To what was the decline in interest rates in the United States primarily attributable? First, to the huge flight of gold to this country from the shadow of Adolf Hitler, a flight which, coupled with the upward revaluation of 69 per cent in the monetary value of gold, swelled member bank reserves by about 14 billion dollars between the end of 1933 and the end of 1939. And second, to the reduced demand for funds, reflected by a net decline of more than 50 per cent in the total loans of all commercial banks in the United States in the ten years ended in 1939.³ Our monetary authorities planned neither of these developments.

² *Banking and Monetary Statistics* (Washington: Board of Governors of the Federal Reserve System, 1933), Table 102.

³ *Ibid.*, Table 3.

Far from following a single-minded policy of reducing the direct interest burden of the public debt, the Reserve System and the Treasury both took actions looking toward neutralizing the expansionary influence of the gold imports.

The Reserve Board in 1936 and 1937 utilized in full its statutory power to double member bank reserve requirements. I think the Reserve banks were restrained from mopping up additional excess reserves through the sale of their entire open-market portfolio only because their portfolio was not big enough in any event and because its sale would have eliminated their principal source of earnings, and might eventually have resulted, therefore, in making them dependent upon Congressional appropriations—a prospect they could not be expected to welcome.

The Treasury, in opposition to its immediate narrow interests, used its gold revaluation profit in nonexpansionary ways. It used some of it to bring about the retirement of the national bank note currency, and most of the remainder for the Stabilization Fund. Again in opposition to its immediate narrow interests, it sterilized incoming gold in 1937 in order to prevent that gold from further inflating member bank reserves.

In raising member bank reserve requirements in 1936-37, the Board of Governors of the Federal Reserve System contemplated only a restraint on undue further credit expansion, not an immediate contraction in member bank holdings of government securities or a rise in interest rates. Nevertheless, the member banks responded by reducing such holdings by 856 million dollars in the first six months of 1937; and the average yield of all Treasury bonds not due or callable for twelve years or more rose from 2.46 per cent at the beginning of 1937 to 2.83 per cent early in April; and the average yield on 3-5 year tax-exempt Treasury notes rose from 1.13 to 1.65 per cent in the same period.

Even during the war, the eyes of the Federal Reserve authorities were not fastened alone on the maintenance of low interest rates for war finance. The authorities were concerned also with regaining their control over member bank credit expansion by eliminating the excess reserves existing at the outbreak of the war. To this end, the Reserve authorities prevented any net addition to the reserves of member banks during the first two years after Pearl Harbor, causing the member banks to use up most of the excess reserves that they possessed at the beginning of the war; and the authorities have since prevented excess reserves, mainly held now by country banks, from exceeding 800-1,000 million dollars.

When the public debt is of only small size in relation to such magnitudes as the national income, skillful management of the debt may seek essentially the same restricted "business" objectives as skillful management of a private debt: a convenient spacing of maturities, minimizing interest costs, and keeping the door open for possible future borrowing. These objectives are by no means unimportant today. They are in no sense illegitimate.

But when the size and character of the public debt are such that it constitutes an important part of the whole economic environment, as is the case today, I do not think it reasonable to suppose that the central authorities

will see their task as solely the attainment of "business" objectives. They will wish to foster a healthy business situation, high employment, stable prices, and the like. Hence, they are forced to consider how to manage the public debt with due regard for our other broad interests as well as for the question whether, how, and how much to manage other departments of our economic life in the interests of a lighter burden of public debt. And they are constrained to approach both parts of the problem with the caution appropriate to the great gaps in our understanding of economic processes and to the limited efficacy of their powers.

SUSAN S. BURR: Preparation of comments on Mr. Woodward's paper has been a difficult task. The subject indicates a fundamental approach going beyond many details on which attention is usually focused. Yet I am puzzled in attempting to evaluate the paper as a whole.

Mr. Woodward's technique appears to resemble that of some shrewd administrators of research who deliberately assign research projects in an ambiguous manner in order to stimulate thinking. Taking this as my cue, I shall address my remarks to several isolated topics that I have considered in trying to understand the subject of public debt and institutions.

First, I find it difficult to divorce myself as completely as Mr. Woodward has from a quantitative approach. I doubt if a broad understanding of the public debt situation and the implications for the future can be fully developed without considerable use of statistical data. He introduces one figure—a gross debt of 260 billion dollars according to official statements—and then proceeds to disqualify the figure by discussing various aspects of government obligations that are not explicitly covered. He implies that the fundamental problems cannot be analyzed quantitatively.

I shall not discuss detailed public debt figures. Government activities have expanded in lines which involve both commitments to make payments under certain conditions and guarantees to pay money. These have implications, both directly and indirectly, for future expenditures and also for future debt obligations. So also has the prospect for growing government activities—a subject that has not been mentioned. In varying degrees, these are all in a somewhat different category from the direct obligations now on the books.

The function of a quantitative approach can be illustrated from Mr. Woodward's concluding section. There he calls attention to a statement by the British historian, Lord Macaulay, that successive predictions that England must sink under a burden of public debt—first of 50 millions, then 80, then 140, then 240, and finally 800 millions—involved a twofold mistake: first, they overrated the pressure of the burden and, second, they underrated the strength by which it was to be borne. An explanation of this experience might well start with a set of data suggestive for our thinking today.

Some years ago as a part of the groundwork preparatory for the settlement of foreign debts after World War I, over-all statistics of the debt experience of England and France in the hundred years following the Napoleonic wars were examined. Two observations can be made: first, the public debts of these countries did not decline over that hundred-year period; on the con-

trary, they increased—not steadily, but at intervals, usually in a period of war. Second, when the figures were plotted on a chart, with ratio scale, along with estimates of national wealth (the usual measure in those days of a country's resources), it was strikingly evident that the wealth of each country had grown at a faster rate than the public debt. Accordingly, the debt had in reality become a smaller burden to the country.

The point I wish to make is that we cannot evaluate our concern over the present public debt and its future without attempting to relate it quantitatively to major factors in the country, such as its national income. Such analyses would present statistical problems, and would probably involve marked difference of opinion. There are, however, real possibilities for useful results. In part these are illustrated by Mrs. Wickens' paper.

My second comment starts with the title of the paper. What meaning should be attached to the word "institution"? There is room for more than one meaning, and several may be equally, if not more, pertinent. According to the dictionary, institution in the most general sense means "that which is established"; it may refer to a practice, a custom, an organization, or a relationship in society. Mr. Woodward has directed his thinking toward certain conventional institutions of society: the family, the church, the business organization, and the state.

In view of twentieth century developments in the financial organization of our economy, why not use the word institution to focus analysis on certain established organizations of business? For example, why not separate businesses into (1) those that provide goods and nonfinancial services, and (2) those that provide financial services. The latter group would include not only commercial banks but also mutual savings banks, insurance companies, other investment institutions, and a variety of other financial organizations. These constitute the group whose function is either to lend money and create credit or to direct the flow of funds by accepting money for lending and investment.

Public debt problems are very intimately related to the operations of financial organizations. As a group, these organizations have been and will continue to be affected by the public debt, but they in turn will exert an influence on the future management and perhaps the size of the debt. When debt is expanding rapidly, as during a war, the Treasury takes the initiative, and the financial organizations are under pressure to purchase substantial amounts of public debt securities. Later, as debt shows little change or is retired, even though slowly, the balance of effects may run the other way; that is, the financial organizations may take an active role in seeking public debt securities because they need liquid assets for current operating purposes and also for investment outlets.

Here again we need a quantitative approach. Our data are more adequate than at any time in our history. The problems originate in the unprecedented volume of public debt and currency. Institutional readjustments are to be expected.

We should be able to anticipate changes more successfully than in the past. World War II is not unprecedented in introducing major developments in

the financial machinery of this country. For example, the Civil War. National banks were created then to provide a market for public debt. Such an innovation must have presented an overwhelming set of problems to the observers of that day. Looking back, however, we see something more than the mere fact of the establishment of a national banking system and a new currency based on government bonds held by banks. We see a marked change in the form of money in general use—the shift from paper money to “check” money; that is, bank deposits. Incidentally, however, it is necessary to cover the statistical gaps of that day by estimates in order to piece out the picture; attention at the time was focused on other matters.

My third comment is brief—on the subject of the fourth central bank. This subject raises an important question that needs further consideration. It may be that the management of the public debt by the Treasury will render ineffective the monetary powers of the Federal Reserve System. I have some doubts, but will not go into the point. Monetary authority, however, does not encompass all powers and policy decisions of the government. Broad non-monetary powers are likely to dominate Washington decisions and, as far as my information and experience gives me a judgment, these powers do not reside in the Treasury; that is, in the so-called “fourth central bank.”

In concluding I wish to comment on the general attitude toward our postwar problems, as reflected in Mr. Woodward's paper. His “counsel of despair” is not unique among economists as is indicated by a quotation from the current *New Yorker*:

At a recent conference . . . at Princeton, a group of prominent biologists got together and decided that things didn't look so hot for Man, that he might very well be on the verge of extinction. The consensus of opinion . . . was grim:

In fashioning man, nature concentrated on the brain, the speech organs, and the hands. All these she co-ordinated. Other organs and parts were permitted to degenerate . . . there are at least a hundred such vestiges which should have been thrown on the scrap heap but which cause trouble.¹

The general attitude is important because success in solving postwar problems will depend to a considerable extent on the approach. To assume such a defeatist attitude makes rather than solves problems. As a substitute, I suggest that we cannot avoid the major readjustments that follow a war. The past, moreover, indicates that in such a situation both our economy and our institutions will show unexplored flexibilities.

RAYMOND J. SAULNIER: Basic to the development of Mr. Woodward's ideas is an interesting conception of the public debt which he defines as a mass of contracts to transfer money claims through the federal Treasury. As Mr. Woodward develops this conception of the public debt it proves to be something of very great range and variety, far different from what it appears to be on first impression. Indeed, it is developed as a kind of summary of the financial implications inherent in the whole range of functions and responsibilities undertaken by a modern state. This is a very useful way to look at public debt: we may call it, for convenience, “later impression public debt,”

¹ January 25, 1945, p. 15.

in contrast to "first impression public debt" which is the familiar variety. But it should be noted that the same conception can be applied to private debt. If one does so, one is in a better position to deal with the question: Does the public debt have an impact on social institutions significantly different from that which has been exercised by private debt? I agree with Mr. Woodward that if we were to pursue an analysis along these lines we would conclude that "later impression public debt" has affected such institutions as the family, the church, and business enterprise in ways quite different than has later impression private debt and the system of private property and capitalist enterprise which it reflects. But we would also recognize influences arising out of the latter.

Important as is this kind of analysis, we are also concerned with a narrower problem: What is the impact of the public debt, conventionally construed, on social institutions? For these purposes we can satisfy ourselves with Mr. Woodward's "first impression public debt" as a "known and finite thing, consisting of the total appearing on the *Treasury Daily Statement*, and made up of the maturities and types reported in detail in the *Treasury Bulletin*," although for Mr. Woodward's penetrating remarks on the inadequacy of this first impression I am sure we are all very grateful.

With regard to Mr. Woodward's discussion of the "inhibitions" that develop in our society as a result of a large public debt—and here I was not always sure whether the references were to the first impression or the later impression variety—I have only one comment to make. I found it useful to substitute the word "attitude" for "inhibition" and in this somewhat different light, which I trust is a legitimate one, I find myself in disagreement on one principal point. Mr. Woodward suggests that the public debt encourages liquidity and an attitude on the part of financial institutions adverse to risk-taking. One can make, it seems to me, a very good case that the opposite attitude has been encouraged. So long as people behave in a reasonably rational manner in the selection of investments, funds will be channeled into one line or another depending on the rates of gross income from investment in the several channels that are open for the use of funds, and the costs to the investing institution of investment in these several channels, including the necessary premium for the absorption of expected loss. Thus, an insurance company considers the relative merits of government bonds, corporate bonds, urban mortgages, farm mortgages, policy loans, real estate equities, etc.

Has the public debt, construed in the broader or the narrower sense, had the effect of discouraging investment in the more risky of these channels? I think not. On the contrary, the easy money policy of the federal government and the consequent low level of return on investment in federal obligations has had the effect of increasing the attractiveness of investment in other lines. The tendency for yields on all corporate bonds to move towards the basic rate, as set by governments, is evidence of this. Thus we find commercial banks, savings institutions, and insurance companies using their funds at the present time in ways which at an earlier date would have seemed definitely on the risky side. And universities, too! We find them in the real estate business, not in their conventional role as the recipients of miscellaneous

parcels, but as active competitors for 100 per cent locations with long-term chain store leases, and all the rest. The list of activities could be a very long and impressive one, as Mr. Woodward knows, for I expect he has made some very important contributions himself to this revival of what might be called "constructive" finance. These developments are the subject of much discussion today, and interestingly enough are most often under attack as being *too* risky! I think it is still open to considerable question whether such investments are as risky as some people think they are, but that is beside the point. The fact of the matter is that financial institutions are not becoming more conservative but are breaking away from conventional patterns, largely because of the lower rate of return on conventional assets. This is one of the points at which current discussion is getting rapidly out of touch with the facts.

There is a great deal that could be said concerning the impact of the debt on the family, the church, and business enterprise, but I shall confine myself to a few general remarks. First, it is certainly true that the modern family is a far different social phenomenon than the family of even the late nineteenth century, but I suspect that the reasons for this difference must be found not so much in an examination of our public debt, viewed on the first impression basis, or even of the modern state looked at in the widest sense, as in an examination of the implications for the family of life under a highly developed machine technology. There is no doubt that the character of family responsibilities has been changed by the state's assumption of certain responsibilities for social security, but they have also been affected in a precisely similar manner by the transference of these responsibilities to insurance companies. This illustrates the point I was making earlier; namely, that if we interpret private debt in the same broad sense that Mr. Woodward interprets public debt, we may see that the impact of the latter is not as different from that of the former as first impressions would suggest. Let me put in a word for private debt and observe that it, too, has encouraged the development of new and significant attitudes and produced many complex shiftings of responsibility among social institutions.

I am somewhat baffled in trying to appraise the effect of the broadening range of governmental responsibilities on the church. In any case it is probably impossible to make a fair appraisal of it at this stage in human history; but it is pertinent to observe that today the church is, in many lands, the rallying point of anti-totalitarian forces. On a different level, I wonder if it is true that the disbursements of churches under their various charitable activities are less now than they were when first impression debt was lower or when the range of government's responsibilities was narrower? Furthermore, construing the public debt in this narrow Treasury statement sense, I suspect that its increase has, on balance, strengthened rather than weakened at least the financial position of church organizations. I do not speak from any broad knowledge of over-all figures but my guess is that the decrease in church income traceable to the lower rate of return on their investment assets has been more than counterbalanced by the increase in noninvestment revenues attributable to the increase in church attendance, and to the higher level of

employment and income which has raised per capita contributions. Also, churches are debtors, and have been benefited in this capacity. Church "debt-reduction societies" have done their jobs very well of late, and it would surprise me very much if one did not find that the mortgage debt of church organizations had decreased substantially over the last ten years. At least I gather this from my friends in the mortgage business.

Finally, let me comment on Mr. Woodward's observations concerning the direction that the transfer of responsibility has taken among social institutions. I trust that I am not misinterpreting his statement when I summarize it as indicating that the responsibilities no longer assumed by the family, the church, and business enterprise are now assumed by the United States Treasury. Mr. Woodward points out that "the Treasury is the ultimate destination of all of the passing on, the transference. . . ." This seems to me to underestimate the role in our political system of the legislative branch of the government and to do less than adequate justice to the many agencies of government that administer directly to people. In other words, I would say that these responsibilities have been transferred to the "state," in the broad sense, as many of them were transferred earlier, and are still borne, by business enterprise. If we were to develop this point we would soon be in the realm of political philosophy and quite out of the customary orbit of the economist.

Let me turn to Mr. Woodward's most interesting and significant remark on this general problem; namely, his observation on the position of the Treasury vis-à-vis the Federal Reserve System, and the emergence of the Treasury as the "fourth central bank."

His statement that the Federal Reserve System has almost no power is by no means unfamiliar, as is evidenced by the several footnote references included in his written paper. Statements have been made by banking authorities themselves, as is further evidenced by Mr. Woodward's footnotes, that add up to the same general conclusion. It is, I suppose, the function of a discussant in meetings of this kind to take issue, and I am happy to take issue with this general conclusion.

Ultimately the influence of a central bank over economic activity rests, first, upon its power to influence the money supply and, second, on its power to influence the direction of the flow of loan and investment funds. The greatly increased power of the Treasury over the money supply cannot be denied, but it is still true that the Federal Reserve System exercises considerable powers in this respect and it is my guess that these powers will increase relative to the powers of the Treasury over the calculable future.

Bank holdings of United States Government obligations have increased from about 20 billion dollars at the end of 1939 to around 100 billions at the end of 1945, and while they have decreased of late they stood at roughly 96 billions on the June call date of 1946. It would be ridiculous, of course, to ignore this segment of bank assets, when one observes that total loan and investment assets of all banks at mid-1946 were about 136 billions. But it would also be a considerable departure from reality to ignore the economic impact of the 40 billions of other loan and investment assets that are held by banks outside their government securities account. These include a con-

siderable and growing volume of business loans, a very rapidly increasing volume of consumer loans, and a volume of nongovernment securities of nearly 10 billions.

Furthermore, it is pertinent to remark that the trend of developments as regards the composition of bank assets at the present time is for holdings of government obligations to decline and for holdings of private loans and investments to rise. This is due to a whole complex of conditions among which we must include the retirement of government debt, although Mr. Woodward very properly points out that the retirement of debt through the cancellation of excess Treasury deposits is a very special case. More important for the long run is the transference of government debt from the commercial banking system into insurance companies, savings institutions, government trust funds, and other fiduciary institutions. In an earlier essay that I was privileged to read, Mr. Woodward analyzed this process of absorption of the federal debt by transfer credit or savings institutions with great penetration and, I thought, with most interesting and illuminating results. If one takes account of the steady, and now very rapid, growth of assets of insurance companies and savings institutions, one reaches the conclusion that, unless national income falls very considerably and in this way decreases markedly the flow of savings, we can expect that very large amounts of the federal debt will be taken out of the banking system in the calculable future. If at the same time there is an expansion of private debt—a development that seems inevitable to me—a quite different composition of bank assets will emerge. As this happens, the influence of the Reserve System over the money supply will increase.

Naturally, their influence will not be as great as it was in the prewar world where the corpus of debt consisted almost exclusively of private obligations, but I would maintain that the movement is in the direction of increased influence. Indeed, the magnitude of this process is somewhat startling. In the six years ending with December 31, 1946, the resources of insurance companies grew at the rate of about 2.5 to 2.75 billion dollars a year; the total loans and investments of mutual savings banks grew at the rate of over 1 billion a year in the same period. It seems not at all unlikely that individuals will continue indefinitely to hold substantial amounts of securities and, finally, it is inevitable that the federal government itself will absorb increasing amounts of its own debt as it assumes wider and wider responsibilities under its social security activities. In the twelve-month period ending in June, 1946, United States Government agencies and trust funds increased their holdings of federal debt by 4.2 billion dollars; commercial bank holdings fell in the same twelve months by nearly 1 billion.

Even without referring to the newer techniques of credit control developed in recent years, and remarking only on this tendency for public debt to move from the commercial banking system to the great public and private pools of savings of the country, I find it very difficult indeed to see any net diminution in the influence of the Reserve System over the money supply in the calculable future. For good measure, let me observe that the prospects are

for more rather than for less flexibility in interest-rate patterns and to this extent the influence of the Reserve System will grow beyond that evidenced by changes in the asset composition of the banking system.

There is an important implication of this transference of debt that may be remarked upon, as a final word. Other things equal, the shift of federal debt, or any debt for that matter, from the commercial banking system to transfer-credit agencies such as savings banks or insurance companies or government trust funds, has a deflationary effect on the economy. It is an open question whether the increase in the amount of bank holdings of private debt over the calculable future will be sufficient to offset the expected net decrease in commercial bank holdings of federal debt. If this offset is not accomplished the economy will be subject, over the near run, and possibly for some time to come, to a persistent deflationary pressure.

E. A. GOLDENWEISER: I am grateful to Don Woodward for preparing a paper that raises numerous fundamental questions and for arranging what I believe was an excellent session of the Association.

I should like to question, however, the great emphasis he places on the growth of power of the Treasury, and his contention that the Federal Reserve System has become merely a rubber stamp in carrying out the dictates of the Treasury. I recognize that the Treasury, through its power of determining the rate at which government securities are issued and the form in which the debt is refunded, has great importance in financial markets; but it has always had this power which has become more important only because of the increase in the debt. Furthermore, the rate at which the Treasury is able to float its securities is greatly influenced by Federal Reserve policy.

The way the picture looks to me is that the government and the economy have been profoundly affected by changes brought about by the depression and the war. The consequences of these catastrophic events have to be taken into account in the conduct of daily affairs by all governmental agencies as well as by individuals and corporations. The Federal Reserve System as a result of its enormous portfolio of government securities has, if anything, greater powers now than it has ever had. The fact that in the exercise of these powers it has to take into consideration possible repercussions arising from the size and ownership of the public debt merely indicates that the Federal Reserve in this respect does not differ from other agencies of the government, or from private institutions and individuals.

If one thinks of the government as a unit rather than as a group of competing agencies, and if one recognizes that they jointly have one objective, the maintenance of stable prosperity, then the functions of the different arms of the government, of which the Federal Reserve is one, must be considered in relation to each other. In pursuing the common objective the President and the Budget Bureau determine what expenditures are to be recommended to Congress and Congress decides what expenditures are to be approved. Congress also decides what taxes are imposed, and in this matter it is guided by the Treasury to the extent to which it chooses to accept the Treasury's

recommendations. While the Treasury has authority to determine the character of government borrowing and refunding, the Federal Reserve has the power of influencing the degree of monetization of the public debt by influencing the extent to which it is to be held by banks as against other investors. The fact that the Treasury and the Federal Reserve have co-operated during the war and presumably will continue to co-operate in the public interest reflects their conception of a common objective rather than the abdication or loss of power by either agency.

MONETARY ASPECTS OF PUBLIC DEBT

THE HERITAGE OF WAR FINANCE

By WOODLIEF THOMAS
Board of Governors of the Federal Reserve System

One of the inevitable consequences of war is the creation of a vast supply of money and other liquid assets and the exposure of the economy to the threat of serious inflation. The amounts of such assets created in the second World War surpassed all previous records, and this superabundance of money, unless wiped out by inflation and revalorization, will continue for many years. Careful monetary and fiscal regulation will be needed for many years to come to avoid, at the worst, serious inflation and collapse or, at the least, instability in prices, credit, and interest rates. As a result of this heritage of war finance, the Federal Reserve System is no longer in a position to exercise effective control over bank credit expansion—the main function for which the System was founded—and faces the problem of finding ways to re-establish and maintain its capacity to influence credit developments.

Methods and Consequences of War Finance

War is inevitably inflationary because people receive incomes for producing and supplying goods which are not available for purchase. War expenditures have to be financed and no country has yet been willing to impose upon itself a tax burden that will take as much as half of current income, the amount required in this country during the war just ended, or even to adopt a program of borrowing out of the people's savings the balance between expenditures and taxes. Throughout the war, efforts were made in this country to raise as much of its cost by taxation as was feasible and to finance the rest so far as possible by tapping the savings of the people. Fiscal and monetary authorities were agreed that financing through banks, which results in the creation of new money, should be kept to the necessary minimum. Nevertheless the banks had to be relied upon to a large extent, and also policies had to be followed to assure a high degree of liquidity for securities sold to the public. Purchases by banks were needed not only to help maintain an active market and to facilitate the general sale of securities, but also to provide the increased money supply needed by the expanding and abnormal war economy.

Although some expansion in the money supply and in banks' holdings of government securities was desirable, the amount that actually occurred was no doubt excessive. "In retrospect," to quote from the *Annual Report* of the Federal Reserve Board, "it is evident that more

vigorous policies should have been adopted in order to raise more of the cost of the war through taxation and to restrict bank purchases of government securities." Many of the financing procedures adopted encouraged banks to purchase more securities than it was necessary for them to buy and thus helped to complicate the problem of postwar adjustments.

As a result of policies adopted to facilitate the financing of the government's needs during the war, there was a tremendous growth in bank holdings of government securities. Total funds raised by the Treasury in the period from the middle of 1940 to the end of 1945 amounted to 383 billion dollars. Over 40 per cent or 153 billion dollars of this amount came from taxes. About 230 billion was obtained by borrowing, of which about 100 billion came from the banking system, including commercial banks, Federal Reserve banks, and mutual savings banks.

Another policy adopted during the war to facilitate war finance was the maintenance of the interest-rate structure at approximately the level existing at the beginning of the war. This policy served a three-fold purpose: (1) it kept down the interest cost to the government; (2) it encouraged prompt buying of securities by investors, who might otherwise have awaited higher rates; and (3) it kept the growth in bank and other investors' earnings to moderate amounts consistent with the purposes of war finance.

The interest-rate structure existing at the beginning and generally maintained throughout the war consisted of very low rates on short-term money, with a wide spread between them and rates on long-term securities. This unusual interest-rate relationship came into being during the years of depression when there were reduced demands from borrowers and at the same time large gold imports and unused bank reserves.

Maintenance of the wide differential between short-term and long-term interest rates during the war, however, encouraged expansion of bank credit because it was possible for banks to sell short-term securities to Federal Reserve banks and buy longer-term issues bearing higher rates of interest, which in turn were stabilized. The new bank reserves created by sales of securities to the Reserve banks provided the basis for a deposit expansion at all banks in the country of ten times the volume of such sales.

Another result of these policies was a decline in long-term interest rates. An implied assurance that prices of long-term securities would not be permitted to decline removed an important distinction between long- and short-term securities, and this policy, together with maintenance of the low rates on short-term securities, encouraged holders

to shift from short-term to long-term issues. As long as the Reserve System stood ready to purchase short-term securities at prevailing rates, these rates could not rise. The longer-term rates declined. These low long-term rates have necessitated substantial adjustments for life insurance companies and other savings institutions.

The method of handling the war loan drives also was a stimulus to bank credit expansion. Nonbank investors could sell previously acquired issues to banks and subscribe for new issues, thus helping to attain quotas. Banks during the drives had excess reserves because deposits against which reserves were required were drawn down in the purchase of securities, while Treasury deposits, against which no reserves were required, increased. This shift of funds resulted in a reduction in member banks required reserves.

As a result of these operations, bank holdings of government securities increased substantially during drives. Between drives, as deposits were reshifted and required reserves increased, banks sold sufficient securities to the Federal Reserve to meet the higher reserve requirements. The net result was a gradual expansion in bank holdings of government securities throughout the war period.

Commercial banks increased their holdings of United States Government securities by approximately 70 billion dollars. At the same time their loans expanded to the highest level since 1930. As a result of the growth in assets, bank earnings increased substantially during the war and in relation to capital funds were at the highest level on record during 1945.

Banks were able to expand their holdings of securities by any amount they could obtain because additional reserves were almost automatically supplied by the Reserve System in following its policy of keeping down short-term rates. The volume of short-term securities outstanding was sufficient to permit a much further expansion of Federal Reserve holdings. In effect the banking system was permitted—in a sense encouraged—to expand its earning assets, and the necessary reserves were supplied. Banks incurred additional expenses in servicing the greatly increased wartime monetary demands, but were adequately compensated by the earnings received.

The result of these developments was a tremendous expansion in the liquid asset holdings of the public. The holdings of deposits and currency by individuals and businesses increased by a hundred billion dollars to two and a half times the prewar level. The inflationary potential in this expanded money supply is roughly indicated by the increase in its ratio to the annual value of the country's total production of all goods and services. This ratio is now about 80 per cent compared with 70 per cent or less in the late thirties, a period of considerable un-

employment and unused resources, and with a little over 50 per cent in the twenties, a period of active business and full employment.

In addition to the greatly expanded holdings of deposits and currency, individuals and businesses have nearly a 100 billion dollars of government securities, or eight times the prewar level. These can be readily converted into cash as long as the Federal Reserve banks stand ready to buy them. This is an aspect of the present situation which has no precedent in economic history and is of incalculable significance.

Inflationary developments that have been evident during the past year and are now approaching a climax unquestionably had their seeds in war finance. As indicated, however, war and its finance are necessarily inflationary. Their effects must be counteracted by direct controls over demand, supplies, and prices, which cannot possibly be in equilibrium during war and its aftermath without stringent taxation. We avoided serious inflation during the war by the maintenance of controls, as well as through the public's exercise of voluntary restraint.

Current fiscal developments and monetary policies are not now adding to inflationary pressures. The budget is balanced. The Treasury's debt-retirement program is exerting a drain on bank reserves and has brought to an end over-all expansion in bank credit. Bank holdings of government securities and loans on securities have been considerably contracted. There has been, it is true, considerable expansion in bank loans to businesses, on real estate, and to consumers. These loans reflect in part needs for the expanding production and distribution of civilian goods, but probably also reflect some speculation and excessive commitments. The more important inflationary pressures, however, are the result of past developments and are beyond the realm of any short-term monetary and credit restrictions that could now be imposed.

The superabundant volume of money has already been created through expansion in the public debt and can be reduced only through contraction in that debt or by a shift from banks or other holders who regard their securities as liquid assets to more permanent investors. Such changes can occur only slowly. To bring them about and in the meantime maintain a reasonable degree of stability in the government securities market are the major postwar problems of fiscal and monetary administration.

The Problem of Postwar Monetary Policy

In view of wartime developments, the central problem that will face the Federal Reserve System in the future is to re-establish and maintain control over bank credit expansion—the main function for which the System was founded. The increases of more than 50 billion dollars in commercial bank holdings of government securities and of 100 billion

in holdings of businesses and individuals, which can be readily sold to the Reserve banks and thus create additional bank reserves, make it difficult, and perhaps impossible, for the System to exercise effective control. The reserves that could be created would provide the basis for a tenfold expansion in bank credit and bank deposits.

It has been suggested that credit expansion could be prevented if the Reserve System would refuse to purchase additional government securities or would purchase them only at higher rates. It is true that a narrowing of the spread between the yields on short-term and long-term securities would remove the incentive for banks and other investors to shift short-term securities to the Reserve System in order to purchase longer-term ones.

A policy of permitting short-term rates to rise, however, would increase the cost to the Treasury of carrying its short-term debt and would complicate the Treasury's refunding problem. It would also increase bank earnings, which are already more than adequate. It has been frequently stated that the System's refusal to follow this course of action is based entirely upon these considerations, expressed in its commitment to the Treasury to maintain a low level of interest rates. It would be more correct to say that the System's commitment is based upon its view that under present conditions a rise in short-term interest rates would not accomplish the desired result of preventing credit expansion and might have harmful effects.

Should the Reserve System refuse to purchase government securities offered for sale and not taken by others, then interest rates would be subject to wide fluctuations. With 260 billion dollars of the public debt broadly distributed among individuals, businesses, and investment institutions, the possible effect of fluctuating interest rates upon the financial position and the actions of these holders is difficult to predict. The consequences of attempting to use such a remedy might be more harmful than the disease.

The System would have to purchase government securities at some rate. It is not possible to know how much of a rise in interest rates would have to occur to stop sales to the Reserve System. Any rise in short-term rates might be accompanied by a rise in long-term rates. If short- and medium-term rates should rise, the premium to investors for making long-term commitments would be reduced and shorter-term investment made correspondingly more attractive. New investment funds would prefer shorter-term as against long-term investment because of the possibility that long-term interest rates might eventually also rise. Higher short- and medium-term rates would thus generate uncertainty as to the course of long-term interest rates. It might even bring about shifting by investors from long to shorter investment, with such

shifting itself acting as a force to raise long-term rates. If long-term rates were permitted to rise, one effect of uncertainty might be to jeopardize the savings bond sales program and cause wholesale redemptions.

While some degree of uncertainty may be desirable, particularly when bonds are selling at substantial premiums, there is a limit as to how far this can be carried without seriously upsetting the market. The events of recent months when long-term bond prices have fluctuated within a range of four points indicate that purchases of these bonds at premium prices are not without some risk.

It is doubtful whether any rise in yields on government securities would discourage banks from selling those securities in order to make private loans or to invest in corporate bonds, if attractive loans and investments were available. Experience shows that changes in Federal Reserve discount or buying rates alone have not been sufficient to stop or even effectively restrain a speculative credit expansion. These changes would be even less effective in a situation where their primary effect would be upon prices of outstanding government securities rather than upon private borrowers.

Long experience with brokers' loans shows that banks will withdraw funds from the central money market in order to take care of the demands of their customers and that they will not be discouraged from doing so by high money rates. In the case of brokers' loans the loans called had to be shifted to other lenders, whereas in the case of government securities the banks need only to sell them to the Federal Reserve and thus create additional reserves. Some power other than that of higher interest rates is needed to deal with such a development.

Proposals for Additional Controls

In view of this heritage of war finance, the Federal Reserve System is faced in the postwar period with a twofold problem: to prevent speculative or otherwise excessive expansion of bank credit and at the same time to assure reasonable stability in the prices of the large volume of government securities outstanding. There must be limits to the ability of banks and others to convert government securities into additional bank reserves and this must be accomplished without widely fluctuating interest rates.

Solution of this basic long-run problem can be assured only by giving the Federal Reserve System additional instruments of regulation such as those suggested in the 1945 *Annual Report* of the Federal Reserve Board.

The three basic plans proposed by the Board for consideration by the Congress may be designated by the following terms: (1) a primary

reserve plan; (2) a secondary reserve plan; and (3) a bond limitation plan.

These three proposals have many similarities and also important differences. In each case adoption would require legislation, which should permit considerable administrative flexibility, because of the wide differences between individual banks and groups of banks. It would also be necessary that they apply to all commercial banks, not alone to member banks of the Federal Reserve System. These powers could be so applied as to leave banks adequate ability to take care of the credit needs of industry, commerce, and agriculture but would give the Reserve authorities some control over excessive expansion of such credits.

The Primary Reserve Plan. This plan is simply a further increase in commercial bank reserve requirements. In order to keep short-term interest rates from rising, it would have to be accompanied by Federal Reserve purchases of securities. The amount of such purchases would probably correspond closely to the increase in requirements. To assure adequate powers to absorb a large portion of short-term securities held by banks, the law should authorize an increase to twice the present statutory maximum, but any increase in requirements probably should be applied gradually and might never reach the maximum.

The principal effects of this measure would be (1) to shift a certain amount of earning assets, presumably short-term government securities, from commercial banks to Federal Reserve banks, and (2) to reduce the ratio of multiple credit expansion on the basis of a given amount of reserves. It would, therefore, diminish the amount of short-term securities available to sell to the Reserve banks and also reduce the potential credit expansion on the basis of any reserves that might be created by such sales.

This measure could be applied to put the banks under pressure to liquidate securities and thus discourage further purchases of long-term issues, while Federal Reserve support would keep interest rates from rising above the established pattern. It would correspond to present banking practices, be relatively simple to operate, and permit adjustments in the market because of interbank flows of funds to be carried out as at present.

The proposal would tend to reduce the earnings of commercial banks and increase those of the Reserve banks. If this plan were adopted it might be desirable for the Reserve banks to have power to pay some interest on reserve balances, in case bank earnings should be unduly reduced.

Legislation authorizing this action might also include provisions for

amending various aspects of the present requirements, such as permission to count vault cash and greater administrative flexibility in imposing different requirements on different types of deposits and in classifying banks for reserve purposes.

The Secondary Reserve Plan. This would establish a required secondary reserve of Treasury bills and certificates equal to a specified percentage of net demand deposits. This percentage might be placed initially at a level that would induce commercial banks as a group to retain their present holdings of short-term government securities—probably around 20 or 25 per cent of net demand deposits would be sufficient. Subsequently the percentage should be sufficiently high to assure for such securities a commercial bank demand large enough to maintain the desired level of rates without Federal Reserve purchases.

To facilitate transition to the new plan, as well as regular adjustments of bank positions required by interbank flows of funds, banks should be permitted to hold cash (including reserve balances) as secondary reserves in place of bills and certificates. This feature, which distinguishes this plan from that proposed by Lawrence Seltzer,¹ is essential to make the plan effective as a limitation on bank credit expansion. Otherwise it would be necessary for the Treasury to supply bills or certificates to banks needing them to meet their secondary reserve requirements against expanding deposits. This would mean further credit expansion and deposit growth.

This plan has the advantage of permitting banks to retain substantial holdings of short-term government securities, but limiting their ability to sell these to the Reserve banks in order to make other loans and investments. This plan is essentially similar to the primary reserve plan, except that under the secondary reserve plan the commercial banks could continue to hold the short-term government securities whereas in the primary plan the Reserve banks would hold them.

The secondary reserve proposal has been criticized because it would purportedly require the banking system to increase holdings of government securities every time there was an increase in deposits resulting from expanding loans. It is, of course, true that credit expansion would increase the amount of required reserves, as at present. Banks would have the alternative, as they do now, of liquidating some other asset or of borrowing from the Reserve banks. Under the proposed plan they could not reduce their holdings of Treasury bills and certificates, unless they had an excess, but would have to sell long-term issues out of their portfolios. The plan would establish short-term government securities in a preferred market position over other types of short-term paper.

¹ Lawrence H. Seltzer, "The Problem of Our Excessive Banking Reserves," *Journal of the American Statistical Association*, Vol. 35, No. 209 (March, 1940), pp. 24-36.

An important disadvantage of this plan is that the double set of reserve requirements might complicate adjustments necessary in the case of interbank flows of funds, but it is possible that such a scheme would be no more complicated in practice than the present system.

The Bond Limitation Plan. Such a plan would limit a commercial bank's holdings of bonds to no more than an amount corresponding approximately to savings deposits and capital accounts plus some percentage of its net demand deposits. In a sense this plan would merely extend the policy pursued during the war of restricting bank investment in long-term Treasury bonds. At the outset these percentages might be established at levels that would prevent commercial banks from adding to their present holdings of bonds—an average of about 50 per cent of net demand deposits or maybe even higher would cover the bulk of the commercial banks. Eventually the percentages should be sufficiently low to assure a commercial bank demand for short-term government securities large enough to maintain present rates without Federal Reserve purchases.

This limitation should apply to all bonds, or probably to all single payment marketable securities having a final maturity of more than one year at time of issue, or it might be more limited in scope. It would have to cover obligations of state and local governments and of corporations; otherwise United States securities would have a disadvantageous market position. Bonds within a year or perhaps within five years of maturity might be exempt from the limitation, but such exemption would cause sudden adjustments in the market and in the banking position as large issues came out from under the limitation.

This measure would not restrict bank lending activities and might even encourage them. It would leave the various sectors of the short-term market—government and private—on a comparable basis. Adjustments of reserve positions between banks would not be particularly complicated by this plan, although some reductions in bond portfolios might be necessary if banks lost deposits, particularly time deposits, and increases would be permissible in case of additions to deposits. This plan would be less restrictive than the others because it would not restrict banks in shifting from short-term securities into loans, although by lowering the amounts of bonds banks could hold, the authorities could force liquidation of bonds, rather than short-term securities, to offset any loan expansion.

Application of the Proposals

Any of these various plans could, once established, be fairly rigidly maintained, while traditional Federal Reserve open-market and discount rate policies were relied upon for current policy measures. Alter-

natively these new schemes could be flexible in their application, with requirements and limitations being varied as bank credit and monetary developments and prospects might justify or require.

It should be made clear that these proposals are not revolutionary or drastic nor would their application interfere unduly with the detailed operation of banks. They are not devised to save the Treasury interest or to keep down bank earnings, although they could have these results, but are primarily to make possible the use of effective controls over credit expansion. They are in accord with the traditional Federal Reserve instruments of open-market operations, reserve requirements, and discount rates, and are essential for the effective use of those instruments in the future.

The use of any of the new instruments would not necessarily mean rigidity in the level and structure of interest rates. It may be said that some such measure is necessary before policies can be adopted which would bring about changes in interest rates on private debt. These measures are designed to set off a large part of the public debt and of bank investments in a way that would free them from the influence of changing interest rates. Savings bonds and even a large portion of marketable obligations held by institutional and other permanent investors are ordinarily not seriously perturbed by variations in interest rates. That portion of the public debt held in the active money market, as well as private debt, could be traded freely and permitted to fluctuate without the danger of these fluctuations causing widespread repercussions.

If the economy should be in position where investment demands exceeded the available supply of savings, then interest rates might be permitted to rise rather than have an inflationary expansion in bank credit. On the other hand, it would be possible to prevent an expansion in credit which would depress the level of interest rates unduly, as was the case early in 1946.

Nor would these instruments unduly restrict banks in making loans. Their purpose, of course, is to give the System authorities power to limit credit expansion—a power they were created to perform but can no longer exercise. Any limitation on the supply of bank reserves, however applied, or on the ability of member banks to rediscount is in some degree restrictive on bank lending.

It is hardly impressive to raise the "bogey" of restricting bank lending at a time when many types of bank loans have just expanded more rapidly and have risen to higher levels than at any time in history. If banks want to take care of the needs of their customers, it would be better for the maintenance of a stable credit structure if they would sell securities that nonbank investors will absorb and not those which will

be purchased only by the Federal Reserve banks. Through the one process there would be no net credit expansion, whereas through the other there would be a growth in bank reserves which would permit multiple credit expansion. Application of these new powers by the Federal Reserve could, and should, be so regulated as to provide banks with adequate funds for meeting all sound needs of commerce, industry, and agriculture. It is the task of the Federal Reserve authorities to supply the banks with enough reserves to meet those needs, as well as to prevent expansion in the available supply of reserves beyond the amount needed for sound credit demands. It has adequate capacity for permitting expansion but practically no power to prevent expansion.

In summary, it may be said that because of the large money supply and the greatly increased capacity for further expansion which is the heritage of war finance, the credit situation in the postwar period is likely to be an unstabilizing influence upon the economy. The money supply, actual and potential, is large relative to current output and incomes, even at present inflated prices. Additional measures may be needed to exercise more effective control over the supply and use of credit than would be possible under existing powers.

In concluding, it might be appropriate to quote the London *Economist* regarding the Board's proposals, as follows:

It comes as a surprise to learn from the thirty-second annual report of the Governors of the Federal Reserve System that the highest banking authority in the United States is submitting for the consideration of Congress proposals for the control of American commercial banking, the like of which has never even been contemplated in Socialist Britain.

The *Economist* then adds the further significant comment:

Before pushing the paradox too far, allowance should be made for two factors. The first is that the United States is a country with a written constitution where every executive action and every policy must, if possible, receive the garb of precise legalism and statutory enactment. What many other countries prefer to achieve by informal consultation and by gentlemen's agreements must in America receive the compulsion and sanction of law. The second factor is that the moral ascendancy of the central banking authorities in the United States is not quite comparable with its counterpart in Britain and that an Act of Congress may be needed to do less well what can often be achieved by a nod from the "Old Lady of Threadneedle Street" in this country.

THE CASE AGAINST THE MAINTENANCE OF THE WARTIME PATTERN OF YIELDS ON GOVERNMENT SECURITIES

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The aim of this paper is to examine the arguments for and the implications of the maintenance of the wartime pattern of yields on government securities.¹ The pattern is roughly defined by $\frac{3}{8}$ of 1 per cent on ninety-day Treasury bills, $\frac{7}{8}$ of 1 per cent on one-year Treasury certificates of indebtedness, and $2\frac{1}{2}$ per cent on the longest term bonds. This is substantially the pattern which was adopted fortuitously early in the war to aid in financing the war by means of bank borrowing at low cost. The arguments adduced for this policy are inconsistent and are not convincing. The extension of this policy during peacetimes, particularly when full employment exists, implies the complete surrender by the Reserve System of quantitative control over the supply of money and eventually necessitates the curtailment of the present-day lending functions of commercial banks. Such a policy affords no satisfactory alternative quantitative basis of monetary control—which control is made to depend entirely upon the management of Treasury receipts and expenditures.

The Burden of Interest Charges on the Debt

One of the main arguments for the maintenance of the wartime rate policy concerns the carrying charges on the debt. It is said that higher rates would impose a heavy burden on the Treasury's budget and upon the economy as a whole.² The available evidence is not convincing that an increase in the annual charges on the debt as might result from the removal of ceilings or interest rates would prove intolerable.

Interest charges on the debt are burdensome in several respects: (1) effort is involved in the collection of taxes and in the payment of interest and the keeping of records; (2) one class may gain at the expense of another since bondholders and taxpayers are not identical; and (3) national income may be adversely affected.

Advocates of cheap money and of deficit spending have argued on

¹ This policy is set forth in the *Annual Report* of the Board of Governors of the Federal Reserve System for the year 1945.

² See Board of Governors of the Federal Reserve System, *Annual Report*, 1945, pp. 4-5, and Marriner S. Eccles, "Economic Conditions and Public Policy," address before the Sixteenth New England Bank Management Conference of New England Council in Boston, October 25, 1946, reprinted in the *Federal Reserve Bulletin*, November, 1946. See also *Annual Report* of the Secretary of the Treasury for fiscal year ended June 30, 1944, pp. 6-8.

both sides of this question. Those who preached the "we owe it to ourselves" doctrine held that the debt was not burdensome because the payment of interest from taxes represented merely a transfer of money from one pocket to another. Obviously if taxes were levied in proportion to bond holdings so that in each and every case the tax cleared perfectly against the interest, the rate of interest on the government's debt would be irrelevant. A 20 per cent rate would be no more burdensome than a 2 per cent rate. Moreover, if taxes to collect interest were based upon bond holdings there would be no incentive for investors to hold government obligations. Consequently, the government would be forced to dispense with the fiction of borrowing and to redeem outstanding debt with new money. To tax existing debt on this basis seems out of the question in a capitalistic system based on privately-owned wealth. Since taxes are not based upon bond holdings, the payment of interest involves a transfer from taxpayer to bondholder, and the debt is burdensome to the taxpayer.

The payment of interest is also said to be a burden upon the economy as a whole. Because taxes reduce total income by more than the payment of interest increases total income, a "net leakage" results in "slowing down" of total income. Although the federal income tax is progressive, interest on balance is paid to nonconsuming sectors of the economy because of the concentration of debt holdings among institutions and high income receivers. Wallich has estimated the net leakage involved in paying 5.7 billion dollars annual interest on a 310 billion dollar debt at 0.9 billion dollars.³

The leakage does not seem to be as great as generally supposed. With a more highly progressive tax system combined with a less concentrated ownership of the debt, the burden as measured by leakage conceivably might disappear. On the other hand a policy of financing the Treasury at artificially low rates of interest would make the calculated leakage greater than it would otherwise be since a larger proportion of the government's obligations would have to be sold to banks.

The reality of leakage attributable to bank holdings is open to question. Wallich observed that holders of demand deposits derive a kind of negative income from the absence of service charges which the bank's income from government securities makes possible.⁴ Similarly Hansen and Greer maintained that the debt is in reality very widely distributed even though held so largely by institutions. Tax paying and income

³ Henry C. Wallich, "Public Debt and Income Flow," *Postwar Economic Studies*, No. 3, December, 1945, Board of Governors of the Federal Reserve System, pp. 84-100. The calculation assumes that taxes are greater than otherwise by the amount of interest to be paid on the debt. Payment of interest is relatively burdensome only if such expenditures support consumption to a lesser extent than other kinds of government expenditure.

⁴ *Ibid.*, p. 91, n. 8.

receiving groups, they said, indirectly become identical because of the services the public receives from these institutions.⁵ More recently Hansen has asserted that debt held by the banking system "is burdenless on the community as a whole in the sense that the cost of bank services must be covered somehow or other."⁶

Excessive Bank Earnings

A second argument holds that a rise in yields on government securities would redound to the benefit of the banks by further increasing their already excessive earnings.

If excessive bank earnings should result from a rise in yields, there are various *ad hoc* means of correction, chief of which is taxation. In any case bank earnings are not a proper criterion of monetary policy and the problem if it arises should not be solved by that means.

Bank earnings do not appear to have been excessive in comparison with the earnings of other enterprises nor in relation to bank capital requirements.

A comparison of the absolute rise in net profits of the banks with the rise in net profits of all corporations of the ten-year period, 1935 to 1945 does not reveal extraordinary gains by the banks.⁷

A comparison of the rates of return on net worth of banks with non-banking corporations does not show that banks enjoyed exceptional earning power except in 1944 and 1945.⁸

The effect of a rise in yields of government obligations upon future bank earnings cannot be foretold with certainty. On the assumption that the present volume of earning assets of the banks remains unchanged, or is allowed to increase, a higher rate of return on those assets obviously would result in larger gross earnings. Whether the current rate of net profits can be maintained will depend on many factors including the volume of earning assets,⁹ which, in turn, is in-

⁵ Alvin Hansen and Guy Greer, "Toward Full Use of Our Resources," *Fortune Magazine*, November, 1942.

⁶ Alvin Hansen, "A Symposium on Fiscal and Monetary Policy," *The Review of Economic Statistics*, May, 1946, p. 71.

⁷ Harris found that for the year 1939-43 "in general banking has not been so profitable as most business enterprises" although he observed that "there are many reasons why their gains should be kept down and possibly even more than they have." See Seymour E. Harris, "A One Per Cent War?" *American Economic Review*, September, 1945, pp. 668-669.

⁸ For insured commercial banks the rate of net profits to total capital accounts was as follows: 1941, 6.73; 1942, 6.34; 1943, 8.82; 1944, 9.73; and 1945, 10.87. In 1945 the rate reached an all time high but preliminary information for 1946 indicates a leveling off in the rate of return.

⁹ In the past two conflicting forces have been at work. The earning assets of the banks (mainly government obligations) tended to increase relative to capital funds but at the same time the yields on earning assets relative to total assets fell. Net current earnings after taxes as a percentage of total assets declined every year from 1937 to 1945. This was because the rate of return per unit of assets was dependent in part upon the total volume of assets since the volume of bank assets is an important determinant of the supply of money which in turn affects yields.

fluenced by the credit policy of the Reserve System and the Treasury's policy in the retirement of the debt, as well as bank costs, wages, service charges, etc.¹⁰

The inadequacy of bank capital has been described as "a plausible, spurious apology for excessive bank earnings."¹¹ The belief that the capital of the banking system is adequate is based on the "riskless nature" and "ultimate soundness" of government obligations. This presupposes that the present policy of guaranteeing the prices of government securities is continued and ignores the possibility that in peacetimes bank assets may consist more largely of private rather than government debts representing risk transactions.

The growth in bank capital since 1934 has been barely sufficient to maintain the ratio of capital to total assets other than cash and government securities. This growth has resulted almost entirely from the retention of earnings. Virtually no new capital has been raised through the sale of stock. It is by no means clear why new capital has not been attracted, but one factor has been the failure of market values of bank stocks to respond to the increased earning power of the banks. Market values of bank stocks appear to have risen in keeping with the growth in equity resulting from the retention of earnings, but, rightly or wrongly, have failed to give further weight to actual or prospective earnings.¹²

The advocates of low yields on government securities are perhaps less concerned with the excessiveness of bank earnings as such than with the fact that a large part of bank earnings is derived from government securities. According to Seligman, "the crux of the problem is just how much the government should contribute to the income of the commercial banks via interest payments or otherwise."¹³

The position of the cheap money school seems to be that the present

¹⁰ For an analysis of some of the conflicting forces at work see Federal Reserve Bank of New York, *Thirty-first Annual Report for the year ended December 31, 1945*, pp. 21-23. See also Bankers Trust Company, *Outlook for Bank Earnings, 1946-1948*, September 3, 1946.

¹¹ Henry C. Simons, "Debt Policy and Banking Policy," *Review of Economic Statistics*, May, 1946, p. 87.

¹² One would suppose that if actual or prospective earnings were excessive, bank shares would sell well above book values. Not only did bank shares fail to participate in the last two stages of the general bull market which culminated in May, 1946, but they failed to rise above book value. The surprising thing is that during the war years when the rate of return on bank capital was rising the ratio of stock prices to book values for thirteen New York City banks was at or less than 100 whereas during the prewar years, 1934-40, this ratio was below book value in only one year, 1938, when the ratio was 0.93, and ranged as high as 1.42 in 1936. See Standard and Poor's Corporation, "Banks," *Industry Surveys*, Vol. 114, Pt. I, No. 96, Sec. 1, November 29, 1946, pp. B2-2. Weighted average ratios of bank stock prices to book values, based on high and low prices are charted in "Banks," Vol. 113, No. 3, Sec. 1, April 11, 1945, and Vol. 114, No. 96, Sec. 2, April 24, 1946.

¹³ Harold L. Seligman, "The Problem of Excessive Commercial Bank Earnings," *Quarterly Journal of Economics*, May, 1946, p. 369.

"contribution" is certainly too large in relation to services rendered and, perhaps, ought to be eliminated entirely. This general viewpoint has been defended on the grounds that (1) the government already has access to whatever means of production it requires through the tax power and the power of the printing presses,¹⁴ (2) the issue of money is a government and not a private function, and (3) in acquiring obligations of the government in exchange for their own, banks perform a costless operation and can hardly be said to provide credit of a higher quality than that which they receive.¹⁵

Point 1 of the preceding argument would apply equally well to other holders of government debt; i.e., to insurance companies, savings banks, or individuals. The fact is that the government did not tax more heavily when it could have done so and, moreover, it was not authorized by Congress to use the printing press nor to sell its obligations directly to the Federal Reserve banks except to a limited extent.

The question raised by point 2 is not whether banks are entitled to receive interest on government securities but whether private banks should be allowed to engage at all in the money issue function; i.e., whether the granting of deposit credit against loans and investments should be abolished. The question in point 3 involves the basis on which banks should be allowed to grant deposit credits.

The complete divorce of the granting of deposit credit from the lending and investing activities of the banks has been advocated for many years. Fisher and earlier writers desired this, not because of excessive bank earnings, but because it was desired to control variations in the supply of money. Some of the more recent advocates of high reserve requirements appear to object merely to the granting of deposit credit on the basis of government as opposed to private obligations on the ground that banks are not entitled to interest income since they do not provide credit of a higher quality than that which they receive. The strength of this argument depends upon the assumption that the Reserve System will continue to guarantee the prices of government securities. It is only on this condition that government obligations become equivalent to money as tender and, consequently, involve no risk of loss to the holders. Moreover, it implies that there is no cost connected with the deposit accounts which have been "created."

If the prices of government obligations are guaranteed by the Reserve System the case for high or 100 per cent reserve requirements is greatly strengthened, not because bank deposits are costless creations, but because the reserve basis of bank credit is uncontrolled. To avoid

¹⁴ C. R. Whittlesey, "Problems of the Domestic Monetary and Banking System," *American Economic Review*, March Sup., 1944, p. 251.

¹⁵ *Ibid.*, pp. 369 and 374. See also Lawrence Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, p. 75.

indefinite expansion of bank credit it becomes necessary to limit the discretionary investment activities of banks. The argument for divorcing these functions, however, relates to control of the money supply and not to bank earnings.

A very high or 100 per cent reserve requirement would limit the loans and investments of banks to the amount of their capital and earned surplus. Banks could not continue to perform their present lending functions if they were made to depend solely on their own capital and surplus. Are the present commercial lending functions of banks desirable or necessary? A number of writers consider these functions obsolete in view of the decline in the relative importance of commercial loans and the alterations which have taken place in the basis of bank credit.¹⁶ However, the absolute amount of bank loans has not altered very greatly and banks are still today the chief suppliers of commercial and industrial customer-loan credit. Despite the large volume of accumulated liquid assets held by corporations and their ability to finance themselves from internal sources, they still rely upon bank financing. In the past year business firms increased their bank debts by several billion dollars even though they also obtained several billion additional dollars from the sale of government securities. The other institutional lenders and the securities markets are not equipped to handle the kind of customer-loan credit which is the specialty of the commercial bankers. Competition for private loans exists among the various lenders, but it is mainly in the case of large borrowers of high credit standing and in the fields of intermediate and long-term credit for fixed capital purposes that the lending activities overlap. In the short-term working capital loan field, particularly in the case of customer-loans to medium and small firms, other lending institutions have not been able to compete.

The essence of modern commercial banking lies in the inseparable combination of the lending function with the money function. If these functions are to be separated and commercial banks forced to confine loans to their own capital and surplus, the costs of present-day banking services cannot be covered. To impose service charges upon deposits to cover these costs would have regressive effects and would shift the cost from the taxpayer to the user of bank deposits probably with no social gain.¹⁷ Consequently, if these services are desirable no clear advantage

¹⁶ E.g., among many others, Henry C. Simons, "Debt Policy and Banking Policy," *Review of Economic Statistics*, May, 1946, p. 88.

¹⁷ On this point Hansen, Seligman, and Poindexter seem to be in substantial agreement. See Alvin H. Hansen, "A Symposium on Fiscal and Monetary Policy," *Review of Economic Statistics*, May, 1946, p. 71; Harold L. Seligman, "The Problem of Excessive Commercial Bank Earnings," *Quarterly Journal of Economics*, May, 1946, p. 376; J. Carl Poindexter, "A Critique of Functional Finance through Quasi-Free Bank Credit," *American Economic Review*, June, 1946, pp. 314-315. On the other hand Simons maintained that the services

is to be served through basic alteration of the present arrangements whereby their cost is partly or even mainly covered by interest payments on the debt. If the income which results from the government's policy of financing through the banking system is regarded as excessive, the simple solution is to tax these earnings, restore the payment of interest on deposits, or require the banks to reduce present service charges. It will probably turn out that "excessive" earnings will be paid away to cover rising costs, particularly wages.

Losses Resulting from Rising Rates of Interest

Maintenance of the wartime pattern of rates is also defended on the ground that higher rates would reflect depreciation in the market value of outstanding government securities. The fear is expressed that, if the price declines were sharp, public confidence in the solvency of banks and other financial institutions and possibly in the government credit itself might be shaken.¹⁸ A related consideration is the difficulty that would be faced by the Treasury in refunding maturing securities.¹⁹ These arguments are difficult to reconcile with the contention already discussed, that higher rates would enrich the banks. It is difficult to see how this enrichment could occur if higher rates also forced banks to take heavy losses on their securities and if banks were unwilling to reinvest maturing funds in the new Treasury issues.

The extent to which various investors in government securities will be harmed by book or actual losses arising from price declines in government securities depends (1) on the extent of the rise in rates and (2) upon the circumstances which govern the investment program of each investor.

Although under present conditions the withdrawal of Reserve bank support would probably be followed by a rise in yields on government securities, it is not to be expected that rates would rise to inordinate heights. The extent of the rise would depend upon many factors, including the opportunities for alternative employment of funds, the current rate of money savings, and the management of the debt apart from direct price support by the Reserve System.

In individual cases the losses in asset values resulting from rising

of "warehousing and transferring private funds" should be paid by "appropriate" service charges, that banking services should not be free only to persons with large balances. See Henry C. Simons, "Debt Policy and Banking," *Review of Economic Statistics*, May, 1946, p. 88.

¹⁸ Woodlief Thomas, "Postwar Monetary Problems and Policies," paper presented at the Inter-American Conference of Central Bank Experts, Mexico City, Mexico, August 15-30, 1946.

¹⁹ Woodlief Thomas, *op. cit.*, p. 9, and Marriner Eccles, "Economic Conditions and Public Policy," address before the Sixteenth New England Bank Management Conference of the New England Council in Boston, October 25, 1945, reprinted in *Federal Reserve Bulletin*, November, 1946, pp. 1231-1232.

rates would depend not only upon *the necessities* of each investor with respect to the amount and timing of outpayments in relationship to inpayments, but also upon the discretionary actions of each investor in the management of his resources.

The small investor appears to be adequately protected by the cash redemption feature attached to E, F, and G bonds. The nature of the contractual liabilities of insurance companies enable them to predict with accuracy their probable rate of outpayments and consequently to plan their investment portfolios in such a way as to avoid *the necessity* of having to sell securities prior to maturity. Individual commercial banks are more vulnerable than other investors because their liabilities are payable on demand and because deposits often shift from one bank to another or from one area to another, and consequently may force the sale of securities unexpectedly.²⁰

For the banking system as a whole Samuelson has argued that losses would not arise from a rise in interest rates since the banking system is a going concern which remains invested and which is unlikely to lose deposits, i.e., to suffer a rate of outpayments which exceeds the rate of inpayments, barring a general demand for currency or a forced contraction in total bank credit.²¹ This argument implies that the banking system is an enclosed and consolidated whole, a single giant bank which is able continuously to reinvest maturing securities at higher rates and thereby more than compensate, in the course of time, the depreciation in book values of old investments.

This proposition does not hold true for a banking system composed of fifteen thousand separate independent units among which clearance is far from perfect. The individual bank is unable to estimate with much certainty the timing or probable amount of deposit withdrawals either seasonally or cyclically and, consequently, may have to sell securities before maturity and probably at less than cost in a period of rising interest rates. Moreover, the individual bank is compelled to observe conventional accounting practices in the treatment of book losses. Fortunately, the average maturity of bank portfolios is relatively short, about four to five years, and therefore losses attributable to a change in interest rates would be limited.

The fears of potential losses to be suffered by debt holders from a rise in yields on government securities seem to have been exaggerated.

²⁰ In addition it is maintained that flexible interest rates and corresponding fluctuations in the prices of government securities "present an obstacle to stable ownership of securities" and are therefore undesirable in interests of economic stability. See Roland I. Robinson, "Monetary Aspects of National Debt Policy," *Public Finance and Full Employment* (Board of Governors of the Federal Reserve System, Postwar Economic Studies), No. 3, December, 1945, pp. 74-75.

²¹ Paul A. Samuelson, "The Effect of Interest Rate Increases on the Banking System," *American Economic Review*, March, 1945, pp. 16-27.

The losses would be greatest in the case of the speculative holders and in the case of those institutions which manage their investment portfolios without regard to the probable amount and timing of outpayments and which, in attempting to maximize current income, have overinvested on the assumption rates would not rise.

Wholesale liquidation of government securities with consequent sudden and sharp depreciation in values will not eventuate unless induced by inflationary developments. To avoid this outcome, continued market support of government securities through creation of money should be abandoned in periods of active business and full employment and the rate structure should be made to depend for its support upon intelligent management of the budget and the debt.

Ineffectiveness of Higher Rates of Interest

The removal of ceilings from yields on government securities has been opposed because higher rates would not prove effective in combating inflation. Essentially the argument is that the rate of interest has only a limited area of influence. Since it is a minor element in cost calculations it is not believed to exert much influence on investment or savings. Assuming this to be so it does not necessarily follow that a policy of freezing rates is desirable. A policy of freezing rates is objectionable, not because higher rates are effective against inflation, but rather because the maintenance of low rates requires further expansion in the supply of money.²² To maintain arbitrarily low rates requires that the supply of money increase automatically in response to pressure on the adopted rate pattern and increase regardless of the conditions that give rise to that pressure. The implications of this are discussed in the following section.

Implications of Maintaining the Wartime Pattern of Yields on Government Securities

The wartime pattern of yields on government securities is an unsatisfactory criterion of central bank policy because it removes all limits upon the availability of bank reserves and renders the central bank powerless to control the supply of deposits. It therefore leads to the adoption of high reserve requirements, to the undermining of the

²² Various writers have argued that higher rates of interest (1) would not discourage inventory speculation, (2) would not deter further monetization of the debt by banks, (3) would not reduce the demand for government accommodation, (4) would not influence the public to reduce its spending either from current income or accumulated cash balances, and (5) would not induce the public to convert deposits into government securities. See, e.g., L. H. Seltzer, "Is a Rise in Interest Rates Desirable or Inevitable?" *American Economic Review*, December, 1945, pp. 836-843; Marriner Eccles, *op. cit.*, p. 1231; Roland I. Robinson, *op. cit.*, p. 74.

loan functions of the commercial banks, and ultimately to the imposition of selective controls over all types of lenders.

The present type of rate structure came into being during the thirties when excess reserves of the banks were very large and when the government was relying heavily upon bank borrowing. The marked disparity between short-term and long-term rates would not have come about if it had not been for the bank demand and the fact that the maturity of bank purchases was shorter than the maturity of the supply of marketable debt. The maintenance of this maturity pattern of yields is dependent upon the continued absorption of government securities by the commercial banks or by the Federal Reserve banks; i.e., upon the continued expansion in the supply of money.

A curve in which yields ascend with maturity carries with it the implication that rates will rise. It is illogical to select such a curve for freezing. If the market is generally convinced that this structure will be maintained, maturity becomes a matter of indifference and consequently investors will purchase the longer maturities which afford the higher yields. Forces are set in motion which would produce a more horizontal curve if this were not prevented by the absorption of short-term securities by the Reserve banks.²³

The government securities held by commercial banks are considered by many persons to be inflationary because they can be exchanged for reserves. Government securities are therefore regarded as "excessive reserves" which afford the basis for a potential expansion of bank deposits.²⁴ Because of this it is proposed to raise reserve requirements or to impose special reserve requirements in the belief that these devices would prevent further expansion of bank deposits. Such measures cannot prevent deposit expansion if rates are pegged at low levels. The need for such measures rests not upon the mere circumstance that the banks hold large amounts of government securities but upon Reserve bank purchases of government securities at guaranteed prices; i.e., upon the maintenance of the rate policy. The sale of government securities now held by commercial banks for the purpose of making new loans or investments will inflate total bank deposits only if the securities are purchased by the Reserve banks. This will not happen if the securities are sold to nonbank buyers.

Even if higher reserve requirements are imposed, the Reserve banks

²³ Once rates are frozen gratuitous profits are certain to be realized from "riding the curve." These profits can be realized because the prices of government securities move to a lower yield basis and rise in price as the period of their life to maturity becomes shorter.

²⁴ Board of Governors of the Federal Reserve System, *Annual Report* for the year 1945, p. 4; *Jobs and Markets* (Committee for Economic Development, 1946), Ch. VI; Henry C. Simons, "Debt Policy and Banking Policy," *Review of Economic Statistics*, May, 1946, p. 86.

cannot prevent an expansion of commercial bank deposits if rates are pegged in the face of a widespread demand for funds. If because of higher reserve requirements commercial banks are prevented from making additional loans and investments, noncommercial bank holders of the debt may be induced to sell securities to meet the demand for funds. The Reserve banks must purchase these securities to maintain rates. No power over reserve requirements can prevent a rise in commercial bank deposits which results from Reserve bank purchases of government securities. Recent proposed versions of the 100 per cent reserve plans²⁵ could prevent the supply of money from expanding in response to the discretionary lending and investing activities of commercial banks but could not prevent deposits from expanding in response to growth in total reserves. If rates are pegged high reserve requirements merely alter the basis on which deposits expand, but do not insure that the deposit expansion will be any less than it would be without high reserve requirements in a free money market.

It is difficult to reconcile the view of the Reserve Board Chairman that the debt is a demand liability and consequently that rates must be maintained, with the Board's view that a rise in total deposits should be prevented. However, some writers attach no importance to the fact that freezing of rates requires a rise in the quantity of money. They imply that further increases in the supply of money will merely be held voluntarily by individuals in lieu of government securities as, it has often been observed, was the case during the war years. They further imply that the quantity of new money would not exceed the amount needed to satisfy the liquidity desires of the public and would have no effect upon the demand for private securities, for capital goods, or for consumer goods.

The fact that rates are frozen may decrease the proportion of money needed to satisfy liquidity desires with the result that excessive money holdings may be spent. The *ex post* equivalence of savings (as measured by the difference between disposable incomes and consumer expenditures) to money plus government securities plus private debts and equities of individuals gives no clue to the functional relationship of the quantity of money to the other factors in the equation. This equation would be satisfied at any level of total expenditures and regardless of the proportion of savings in the form of money, the prices of securities, or the level of commodity prices.

Under conditions of full employment the maintenance of a fixed

²⁵ Board of Governors of the Federal Reserve System, *Annual Report*, 1945, p. 8; Lawrence H. Seltzer, "The Changed Environment of Monetary-Banking Policy," *American Economic Review*, May, 1946, p. 65; *Jobs and Markets* (Committee for Economic Development, 1946); Simeon E. Leland, "The Government, the Banks and the National Debt," *Commercial and Financial Chronicle*, Vol. 163, No. 4456, Sec. 1, January 17, 1946, p. 28 B-4.

pattern of rates becomes essentially a device by which an increase in private investment expenditures plus government expenditures is financed by the creation of money. The method by which aggregate expenditure is financed is of importance because it may affect total incomes and total expenditures.

Generally speaking, if expenditures are financed by the banking system, i.e., by the creation of money, total incomes will rise by a greater amount than if expenditures were financed by borrowing or by taxation since the new money represents a net addition to total income payments. Money creation does not involve offsetting effects upon total income that may accompany taxation or borrowing from non-banking sources. In a depression money creation may be a desirable method of stimulating a rise in national income but it can hardly be so regarded once physical and human resources are fully employed if its main effect is to inflate prices.

Where expenditures are financed by money creation, the only quantitative control possible is over the timing and amount of expenditures. The advocates of freezing rates on government securities, or of further reducing those rates, have not, however, offered any clear-cut criteria for controlling expenditures. The inference is that government net cash expenditures, or surplus, would be made to vary in such a way as, on the one hand, to promote full employment and, on the other hand, to prevent inflation of commodity prices.

The continuance of a policy of maintaining the wartime pattern of yields therefore raises the question whether we can rely upon fiscal controls over the volume of money in place of the former quantitative controls of the central bank. At this stage of development fiscal controls do not appear to offer the necessary flexibility and probably would not afford this flexibility without the grant of autonomous powers to the Treasury. Disagreement is widespread regarding the timing and the proper technique of controlling government cash expenditures (or surplus)—whether by varying taxes or by varying expenditures or by both. Moreover, there is little agreement upon debt management and as yet relatively little attention has been given to the technique of employing government cash surpluses in the retirement of debt, a device which must be used if government hoarding of cash is to be avoided.

The policy of maintaining the wartime pattern of rates does not in itself afford any solution to the problem of monetary control even though bank reserve requirements are raised to high levels. On the contrary, this policy merely involves the surrender of existing central bank control and forces still greater reliance upon fiscal controls, which are necessary in any event.

MONETARY-FISCAL POLICY, DEBT POLICY, AND THE PRICE LEVEL

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Monetary-fiscal policy, including its handmaiden debt policy, is the keystone of the new economics, with its primary emphasis on the over-all level of income and employment. Surely much good has come of this special emphasis, but in the rush to board the bandwagon no little uncritical enthusiasm may have been engendered and many implications remain to be developed. It will be my contention: first, that most of the government's economic policy (including debt policy) over the last decade has consisted of a series of *ad hoc* decisions calculated to settle pressing current problems and giving only minor attention to longer run implications; second, that the combination of powerful producer pressure groups and widening recognition of the employment-creating powers of deficit financing is rendering obsolete the opportunistic expansionary policies generally advocated to obtain full employment; third, that stabilization of the value of money represents the most hopeful long-run guide to monetary-fiscal (and debt) policy, partly as an end in itself but primarily as the most promising means of achieving a continuously rising, relatively stable level of real income and employment; fourth, that against the background of such a specifically adopted policy guide, certain fundamentals of debt management are greatly clarified and policy conclusions are indicated that are quite different from some of those commonly accepted.

I propose to confine my comments to certain fundamental long-run problems. While some of the policy implications that emerge are obviously impractical for today's problems, I think this consideration of currently "unrealistic" steps may be rewarding, mainly because it may point directions in which we should move but also because such analysis often turns up more significant short-run policy suggestions than does exclusive concentration on "realistic" short-run proposals.

I

Let me begin with three propositions: (1) The direct influence of trained economists on the formulation of top-level economic policy is at best haphazard, in spite of the widely remarked influence of so-called "New Deal braintrusters." (2) Nearly everyone in Washington high enough to exercise any real direct influence on policy is consistently so snowed under by day-to-day problems that there is little, if any, time left for consideration of the long-run implications of current decisions.

(3) The resulting indecision, lack of continuity, absence of clearly stated policies, and widespread arbitrariness in Washington create major uncertainties highly disruptive to private planning in all phases of economic life.

Since time is short and these propositions seem reasonably obvious, I make no effort to document them here. The most pointed reminder is the extemporizing, opportunistic formation of labor (wage) policy, culminating in the increasingly disorderly retreat of the government over the past two years before the powerful labor groups it had nurtured and the desperate legal maneuvers against Mr. Lewis that temporarily avoided complete rout only by the narrowest of margins.

Out of these extemporizing policies of the thirties and the war years has come a concentration of political and economic power in three major producer groups—labor, agriculture, and business. While the unity of interest and action of each of these groups is easy to over-emphasize, the events since V-J Day should suffice to suggest the magnitude of the forces. Exercise of such powerful economic pressures through the political system is clearly incompatible in principle and operation with anything approaching the traditional liberal ideal of the market as a compromiser of competing economic interests. Stratification into three huge monopoly groups represents the crowning deviation from the competitive ideals of maximizing output and minimizing price. Clearly, steps must be taken to prevent these three groups from carrying forward their wartime monopoly powers if we take seriously the announced desire of the American people to see the government withdraw from attempting to regulate directly the bulk of economic transactions.

Economic group interests have become so effective that in a showdown *no* responsible government, whatever the party in power, will be able to avoid direct intervention if three such powerful economic groups lock horns in bitter conflict—witness the labor situation of the late war and immediate postwar period. And settlement of conflicting powerful economic group interests through the political arena cannot be greeted joyously, if the experience of the last few years is any guide. Indeed, the one certainty seems to be that expediency will repetitiously dictate partial capitulation as a compromise device in which the major burden of higher prices for less output is passed on to the consumer.

II

The significance of this situation for monetary-fiscal policy is far-reaching, when account is also taken of the increasing popular recognition of the employment creating potentialities of government deficit spending. If, as in the new economics, primary reliance is to be placed

on monetary-fiscal policy to maintain total monetary demand at a "full" employment level,¹ the task of monetary-fiscal policy is a clear and unhappy one: try to keep one jump, but only a short jump, ahead of the income demands of the unions, farmers, and businessmen! By keeping just far enough ahead, over-all employment and production may be maintained reasonably well and inflation will not get too far out of hand—at least not until the competing groups pushing up on wages and prices catch on to the policies of the monetary-fiscal authorities. When they do catch on, heaven help us! For if they become reasonably sure that expansionary government monetary-fiscal policy will bail out any temporary loss in employment or sales caused by too rapid an increase in money wages or prices, every group has an open invitation to try constantly to improve its own (relative and absolute) position by upping its own price and income demands.

Unless it is willing to strike at the groupism itself, the government's only apparent way out is through expansionary monetary-fiscal policy. And given the pressure groups, cumulatively higher prices are a long-run, odds-on bet, even though restrictionist producer practices may hold the volume of output and employment substantially below possible competitive levels. Expansionary financing can really succeed only so long as it is not fully understood by the pressure groups. It is only in a society relatively free from such pressure groups that expansionary government financing can, over the long pull, expect to provide relatively full employment without inflation.

It may be objected that this analysis overstresses greatly a purely temporary current situation, where special inflationary pressures exist and where organized producer groups are much stronger than in a "normal" situation. But, looking ahead, on one point there can be no mistake. We cannot on the one hand assume full employment, maintained by an announced policy of government deficit financing, and simultaneously assume that everyone acts as if he were in a depression and had never heard of the government's policies. If we assume a monetary-fiscal policy openly operated to maintain full employment, then we must face the consequences of this policy in a society characterized by strongly organized producer groups ready to act in their own (supposed) interest through both economic and political channels!

For the government to "guarantee" full employment through fiscal policy under anything like the present institutional arrangements would thus be to invite if not certain defeat, at least certain inflation. Merely to tie the volume of new money (more broadly of deficit financing) to the "maintenance of full employment" cannot slay the inflation

¹ The question of what constitutes practically attainable full employment need not be an issue here.

dragon for economists who concern themselves with such old-fashioned matters. Far more certain, it cannot allay the deep-rooted historical fears among laymen concerning the inflationary outcome of large-scale government deficit financing and money issue.

III

Economists (including myself) who believe that a positive, strongly implemented monetary-fiscal policy is essential for the development of a stable, growing economy² thus face both a serious problem of selling the monetary-fiscal measures required for long-run economic stabilization and a special stumbling block in the existence of the aforementioned powerful pressure groups. These circumstances suggest giving serious consideration to stabilization of the value of money ("the price level") as *the* proximate guide to long-run monetary-fiscal policy. All round, this relatively old-fashioned plan may well provide the best basis for effective utilization of the stabilizing potentialities of monetary-fiscal policy. Its firm adoption by the government at a reasonably full employment level, probably after some deflation from current prices, would yield very important advantages.

1. The first task facing advocates of monetary-fiscal stabilization measures is still to sell their product to the policy makers and the public. The Senate and House Committee hearings on tax and monetary measures during the depression and the war permit no illusions that, even in the New Deal days, the top policy makers really understood and believed in the active, two-sided use of monetary and fiscal policy as a device for controlling the level of income and employment. Most unimpressed were the leaders thrown into positions of legislative control by the recent elections. Balanced budgets, steady debt repayment, taxation for revenue only, ring again in the pronouncements of the political leaders. Fears of "unsound credit," "debased money," "national bankruptcy," and "disastrous inflation" are still a major reaction

²These comments presume substantial agreement that monetary-fiscal policy should play a major role in stabilizing employment and production at as high levels as is practical. They do not presume, or even agree, that monetary-fiscal policy alone can solve the full employment problem. On the contrary, attention to longer-run considerations points directly to the major role of monopoly price and output policies at all levels in preventing the effective utilization of monetary-fiscal policy to maintain reasonably full employment without inflation, and I should urge the adoption of effective antimonopoly (i.e., antirestriction) measures as of comparable importance with monetary-fiscal policies for solving the over-all employment problem. This paper, however, takes the unfortunately realistic view that the monopolies are given in the problem as it now exists. No sharp distinction is drawn here between monetary and fiscal policy, since for present purposes none is necessary and since debt policy is a joint monetary-fiscal operation.

The discussion is directed at the problem of high-level output and employment in peacetime. Should war return, the practical problems of adhering to the policies suggested would be greatly magnified. Yet, with only moderate exceptions, the peacetime arguments are in principle equally applicable to war finance.

to the suggested use of deficit financing to expand income and employment.

"Stable money"—price level stabilization—is the antithesis of the inflationary dangers implied in "unsound finance" and "debased credit." To the man in the street, stable prices are sound and fair. Yet price level stabilization, adopted at a time of relatively full employment, would call for precisely the monetary-fiscal measures desired by those who look directly to the suspect goal of full employment. Any boom would lead directly to rising prices, which would call for monetary-fiscal contraction to check the rise in the price index. Any important recession would quickly lead to falling prices, which would call for monetary-fiscal expansion to check the decline in the price index.³

This is not, of course, to say that price level stabilization alone would be a guarantee of national economic stability. Such a view would be naïve. No fiscal-monetary policy, however guided and implemented, is going to eliminate all fluctuations in the level of income and employment. Price level stabilization is not a counsel of perfection—it is a precept of action. Price stabilization, if actually maintained, could and would guarantee that expansive or contractive tendencies would not result in the great cumulative waves of expansion and contraction we know as booms and depressions; it would also call for continued expansionary measures should the fears of the stagnationists prove well founded. Though the price level itself is of secondary importance in business fluctuations, its utilization as the guide to monetary-fiscal policy could well provide a major selling point to "nonbelievers" in fiscal policy and call for substantially the policy steps indicated by consideration of the more basic levels of employment and real income.

Here is a common meeting ground for the new economics and the skeptical layman—an honest meeting ground on which neither need give up the basic tenets of his position! Here also is a meeting ground that would provide a stable monetary basis for consumer and entrepreneurial expectations. Such a foundation, so sadly lacking over all of our history to date, would surely be a major contribution to the avoidance of cyclical fluctuations and to a climate conducive to large-scale private investment.

2. Would price level stabilization really call for monetary-fiscal

³ This assumes use of a relatively sensitive price index, which would reflect reasonably promptly important changes in the level of business activity. While inflexible monopoly prices are widespread, my own examination of the price data indicates that this problem is surmountable, taking into account the companion criterion that the prices used be important ones for the level of business activity and for the cost of living. On the question of price criteria see H. C. Simons, "Rules versus Authorities in Monetary Policy," *Journal of Political Economy*, February, 1936.

policies as satisfactory as those forthcoming under a "full employment maintenance" rule or under continuation of the present *ad hoc* arrangements? The answer depends on two things: first, how wise and effective one thinks government economists are in prescribing and selling stabilization policies and, second, how important in fact is the problem of organized producer pressure groups for the maintenance of high level employment without inflation? On the first score, the events of the past year have certainly done little to strengthen one's faith in the wisdom and effectiveness of his professional fellows in Washington, though this is a diverse group about whom meaningful generalization is of course very difficult. While no price index would call forth minute variations in policy calculated to catch every fluctuation tendency at the outset, one could hardly say that government price policy and fiscal-monetary policy in the past has proved highly responsive to even major deviations, much less minor ones.⁴ On the second score, my own premonitions have already been indicated.

Bluntly, the danger is that organized labor, agriculture, and big business will become involved in a creeping or explosive income expansion race in which government fiscal policy dares not fall behind lest unemployment develop, while society in general bears the burden of the inflation. Such a race, it should be emphasized, is quite conceivable in a "mature" economy as well as in a vigorous, expanding one. So long as the government undertakes to provide essentially full employment through monetary-fiscal policy, strong group income pressures are invited. Unions, farmers, and businessmen have never been notoriously hesitant about claiming "adequate" incomes or charging "fair" prices to the government. It should also be noted that the inflation resulting from such a race need not increase employment or production, even when unemployed productive factors remain. Indeed, the further we move toward effective cartelization at all levels of the economy, the more likely it is that expanding over-all demand will affect mainly prices rather than output.

Avoidance of this circle of income inflation can be assured only by some sort of truce between the groups involved, assuming that the government wishes to make active use of monetary-fiscal policy and that no effective steps are to be taken against the existence of the powerful monopoly groups. Price level stabilization is the only tangible basis I can see for such a truce. No one can blame labor or agriculture or business for not wanting to be left behind when prices are rising; that self-restraint will check inflationary pressures when full employment has been reached is a pious, and I think unreasonable, hope. But

⁴ I personally confess to far more confidence in my friends' ability to prescribe adequately over the long pull than to influence policy in accordance with the prescriptions.

institution of a stable price level policy by the government would introduce a basic "stabilizer" into this delicate situation, a stabilizer that would involve recognition that the consequence of too high prices is unsold labor and unsold goods.

After our experiences since 1929, selling the general idea of a stable price level to labor, business, and agriculture should be easy. The real test will come in their willingness to accept the corollary of unemployment (low sales) as *prima facie* evidence of too high prices and wages. Certainly without a firm guarantee of adequate total monetary demand this acceptance will not be forthcoming. But given the total market guarantee implicit in price stabilization, one may perhaps hope that (say) organized labor could be persuaded that everyone ultimately gains from a stabilized price level and that in a private enterprise economy real wages can rise over the long pull only by increasing labor productivity, not by a competitive dogfight of income inflation. For labor, the most strategic group, acceptance of a stable price level truce would protect it against diminution of real wages through decreases in the value of money, and would permit it to claim the benefits of increased productivity through steadily rising money (and real) wages in the industries concerned.

Perhaps to suppose that labor could be persuaded to accept such a truce—that it can be persuaded that its own best interests, as a group, lie in wage rates rising no faster than the increase in productivity—is pure phantasy, and comparable suppositions for farmers and businessmen are likewise mere dreams. But just as real international peace ultimately depends on the willingness of the Big Three to play the peace game in good faith, so real economic peace ultimately depends on the willingness of the economic big three to play their game in good faith. There must be an agreed, impersonal, obviously equitable meeting ground or framework of rules to implement this economic peace truce. In our society this framework must, I suspect, come from without the immediate area of conflict—must, in effect, be monetary. Acceptance of specific monetary stabilization seems to be the only way compromise of these powerful income interests can be permanently thrust back to private (i.e., collective bargaining or market) determination—the only way full employment without inflation can in effect be assured in a society so organized as ours is. The precise monetary stabilizer used is of secondary importance. Price level stabilization appears most feasible primarily because of its undeniably great popular appeal.⁵

⁵ A brief analysis of the relative virtues of various long-run monetary "rules" (stable prices, prices falling with increasing productivity, etc.) is contained in my article, "Rearmament, Recovery and Monetary Policy," *American Economic Review*, March, 1941, pp. 37 ff. For a somewhat different evaluation, see also Simons, *op. cit.* Many writers have advocated

If this persuasion is impossible, or more likely only partial, it may still be the wisest policy for the government to adopt a firm price stabilization policy. This course of action would imply willingness to stick by the price level chosen in the face of whatever unemployment developed from increases in wages and individual prices beyond the full employment levels. While unemployment from this source could hardly be expected to grow to many millions, the position of the government would be a most trying one in the face of the inevitable clamor for expanded demand to help reabsorb the unemployed, and it is doubtful if the position could be maintained without widespread previously solidified support. Much the greater hope is that some simple and honest slogan such as price level stabilization can be substantially "sold" (by degrees, of course) to producer groups as an essential, equitable monetary framework for a stable private economy.

3. From a public painfully aware of the sharp price level fluctuations in booms and depressions, price stabilization should be able to command strong support. The "equity" aspects of the policy are appealing. The business stabilization aspects, at a general level, are easily understood and again should be highly salable to the layman. If the safeguard of a guaranteed stable price level cannot salve the popular fears of expansionary fiscal policy, it is not easy to see what can.

Lack of time prevents anything more than this brief cataloguing of the major possibilities of price level stabilization in the difficult situation ahead for money-fiscal policy. Let me therefore note only briefly in passing certain other important problems, before moving on to the implications of such a price stabilization program for debt policy.

4. The most serious objection to adoption of a firm price stabilization policy is the loss of flexibility involved in tying policy to a definitely stated rule or guide. But this loss would be by no means so drastic as appears at first glance. On the score of timing, an examination I have made indicates that policy based on price stabilization would have shown a very marked lead over that actually adopted. On the score of foregoing administrative discretion, it would be a gross misconception to suppose that a price stabilization guide would tie the monetary-fiscal authorities' hands as to types of measures to be taken. On the contrary, within an established framework, much wider than present

stabilization of the wage level as the critical step in economic stabilization. Certain disadvantages relative to price stabilization are suggested in the reference above. The major issue, however, concerns the implementation of wage stabilization. This clearly is not per se susceptible of monetary implementation; it calls for a national wage policy involving far-reaching direct government controls. Public support and labor agreement to such continuous controls would, I suspect, be more difficult to obtain than to price stabilization. However, if the direct control course were chosen and effectively implemented, most of the problems for which a price stabilization policy is suggested could be more or less satisfactorily handled.

discretion could appropriately be delegated to the authorities, whose fullest skills could be utilized to deal appropriately with unstabilizing factors of different sorts by monetary, fiscal, or other measures, just as is now the case.

The major loss of flexibility would arise in the case of unemployment caused by advances in wage rates or other particular prices above the full employment level at the given price level. This is just the problem discussed at length above; it is a major hope of the price stabilization approach that it may serve as a truce, or "stabilizer," in the otherwise completely unstable over-all factor-price, consumer-price situation. The issue here, I think, is not at bottom one of monetary flexibility but rather one of monopoly—monopoly groups in the larger sense of organized labor, business, and agricultural political pressures, and monopoly in the smaller sense of particular labor, business, and agricultural monopolies that restrict employment and output in particular areas. If we are unwilling to attack these monopolies directly (which I feel is unforgivable defeatism, whatever our monetary policy), we must face the issue of whether our monetary-fiscal policy shall be simply a device for easing the burden of the monopoly pressures from the monopoly groups onto society at large, or whether we will adopt a firm monetary-fiscal policy that forces the consequences of monopoly pricing into the open and at least in part back on the monopolists. It is in taking a firm stand on this issue that the definite price stabilization proposal mainly differs from the recent pronouncements by many economists in favor of price stabilization, *together with* the level of employment, as the *two* major guides to monetary-fiscal policy.⁶

Price stabilization provides, in fact, a high degree of "built-in" flexibility over the long run, in the sense that whether the economy is expansive or stagnant the monetary-fiscal policy dictated is automatically the right one. Developing unemployment will always cause a downward pressure on prices, calling for the expansionary measures appropriate to underemployment. Rising prices will call for restrictive steps to avoid mere price inflation. Commitment to stable prices thus avoids the danger of plumping all our bets on the wrong economic prediction for the highly uncertain future.⁷

⁶ It should be noted that monopoly raises serious distributional questions under price stabilization, as under any other monetary policy. If, for example, big business or organized labor has strict enough restrictions on entry, by raising its own prices under a price stabilization system it could force the resulting unemployment onto unorganized groups perhaps even more effectively than under the present *ad hoc* arrangements. This fact, however, mainly points again to the basic need for a more effectively implemented antimonopoly policy.

⁷ On the importance of maintaining flexibility and on the whole role of price stabilization in the short and long run, see the excellent statement of A. G. Hart, "Facts, Issues and Policies," before this convention last year, and the penetrating comments of William J. Fellner.

The problems of implementing price stabilization are the same as those of implementing a full employment monetary-fiscal policy or any other monetary-fiscal policy that seeks to take strong action against business fluctuations. These problems are very great. I doubt that we are prepared within the near future to implement effectively *any* real stabilizing policy. But here the relevant point is, it is no more "impossible" to stabilize the price level than to implement most other significant monetary-fiscal stabilization plans. If anything, the difficulty is less for price stabilization, since stabilization, once fully instituted, would generate strong self-enforcing tendencies through expectations.

IV

For a central government with money-creating powers, debt management is properly a monetary-fiscal control function, not a narrow money-raising and repaying function. A central government need not, and in general ideally should not, borrow money from the nonbanking public. If funds are wanted for transfer purposes, taxation should be utilized. If funds are wanted to augment the volume of income and employment, new money should be created. The only appropriate control function of debt operations vis-à-vis the nonbanking public is the sale of securities in boom periods and the repurchase of securities in depressions.

These propositions about fundamentally conceived debt policy run directly counter to most fiscal orthodoxy. We are not yet convinced that the primary function of debt policy is monetary-fiscal stabilization, not mere money raising. In considerable part, this lag is attributable to legitimate distrust of any policy of too easy government money creation. If price stabilization is accepted as the proximate aim of monetary-fiscal policy, these fundamentals of debt policy are clarified and a safe framework is provided for their utilization.

To make the propositions simple and straightforward as possible, let us consider for the moment only new debt operations (i.e., disregard the problems connected with presently existing debt). Let me illustrate by assuming a situation in which prices are falling and unemployment developing. Here we need expansionary fiscal policy, an underbalanced budget. The deficit may be covered by borrowing from the public or by money creation (directly, through the Reserve banks or through the commercial banks). The government may get an expansionary effect by borrowing relatively idle funds from the public. But money creation is obviously surer and more completely expansionary. Why borrow from the public at all? Conversely, if we need to check inflationary developments, an overbalanced budget is called for. Taxation to retire publicly-held debt will be somewhat deflationary, since the transfer

will probably be from more active to less active balances. But this effect is partial and uncertain; it involves returning the collected funds to spendable balances. How much more efficient for the tax receipts simply to be withheld from circulation; i.e., for money to be destroyed (directly or through redeeming Reserve bank or commercial bank-held debt).

This fundamental advantage of the money-creating and destroying method is easy to see. Certain further characteristics of "sound" debt policy may then be indicated.

1. Debt operations vis-à-vis the nonbanking public, if conducted at all as part of a monetary stabilization program, should operate exactly contrary to commonly held principles and to the pattern of money-creating debt operations. Debt should be expanded—sold to the public—in boom periods in order to soak up surplus funds. It should be contracted—bought back from the public—when depression tendencies appear, in order to place new funds in circulation. Effective operations of this sort would probably require reasonably flexible interest rates on the securities used and either willingness of the government to repurchase its own securities at a premium or the use of securities redeemable solely at the option of the government. Substantial sales of securities in booming periods could be achieved only at generous interest rates; redemption when depression threatened would mean purchase when rates were falling. Such debt operations, it should be noted, would involve a deliberate attempt by the government to maximize its own losses on such security transactions.

If, however, as appears to be the case, the government is determined to stabilize something like existing yields on governments, such anti-cyclical debt operations vis-à-vis the public are precluded and the option of converting governments into cash at guaranteed rates is bestowed on the public. Actually, there is every reason to suppose the existence of such liquid government debt held by the public will have a cyclically perverse effect, certainly during booming periods when deflationary measures can be offset through easy public conversion of governments into current spending power. By our current debt policies we not only give up a control device, we intensify the problem of control.

2. Since there is no need for the government to borrow funds from the public and since such borrowing under a supported price policy has limited or even negative monetary stabilization effects, there is no monetary reason why the government should borrow from the public at all. Against such a departure from conventional debt policy, however, would be raised the violently protesting voices of insurance companies, educational institutions, mutual savings banks, trust funds, small and

large individual savers, and others too numerous to mention, who look upon government securities as the ultimate in safe, sound, secure investments. Insurance companies alone need billions in new investments each decade. Other socially approved organizations also will have steadily increasing funds for investment. Without government securities, what would these investors do?

In this connection two observations seem relevant. It may well be socially desirable for the government to subsidize these institutions which play such a central role in a socially and politically stable economy. But if this is so, we should recognize that the interest being paid these investors by the government is a subsidy, and should view the problem of rate levels in this light. Rate determination on public-consumption securities would thus involve a careful weighing of the fundamental social right to subsidy, and of the composition of benefiting groups (say life insurance purchasers) against the group financing the subsidy, rather than an elaborate assessment of what issues the market will take at what rates.

Removal of the possibility of large-scale investment in virtually riskless, substantial yield governments might be a very healthy development for a private enterprise economy. This would force a great army of investors to look in the private economy for investment opportunities instead of plumping for highly attractive "safe" governments. With the timidity of private investment funds, particularly of institutions and middle-class savers, a serious barrier to the effective development of private investment, sound public policy calls for governmental withdrawal from pointless direct financial competition for the funds of private savers, as well as provision of a framework within which private investment is less risky.

This argument that the existence of government debt impedes the flow of savings into private investment of course runs counter to the standard doctrine that government securities serve as a useful medium for converting private savings into real investment where private channels fall short. But if the problem is reduced to essentials, it is clear that by providing an attractive investment opportunity for private savings the government is directly reducing the incentive to invest in private outlets. To be sure, absence of governments would not mean a corresponding increase in real private investments, *ceteris paribus*, but it surely would mean a substantial increase. Such investment gap as still remained would then be appropriately handled by direct new money borrowing. The growth in the public debt would be smaller and cheaper, and more incentive would be provided for the private economy to do the job.

3. The choice between means of money creation is not a critical one,

although sale of special low- or noninterest-bearing securities to the Federal Reserve seems clearly the most efficient device. This is so because it places the function of money creation and withdrawal within the government and so provides maximum flexibility; because it avoids continued reliance on and higgling with the commercial bankers over the terms on which the money supply should be augmented or decreased; because it holds interest transfers to a lower level; and because the obvious money creation involved in the Federal Reserve mechanism focuses the spotlight on the use or abuse of this function.

On the other hand, the problem of appropriate payment to the banking system for its money system services must be faced. If the government does not cover a substantial share of this cost through interest payments, either it will have to finance the service otherwise or regular bank service charges will need to be greatly increased. The issue here is not a major one, but it cannot be avoided. Probably the share of the cost now borne by the government is not greatly excessive in view of the widespread direct and indirect services rendered by the banks to the economy at large, and the disruption of a shift to major reliance on bank service charges would be great. Whichever way the money is created, difficult problems of dealing with bank reserves are faced. If the commercial banks are used, the problem is one of feeding out just the appropriate volume of excess reserves and insuring (say by the so-called "Seltzer," "Leland," or "Robinson" plans) that the new governments do not in fact become additional excess reserves. If the Reserve banks are used, the problem is one of mopping up the newly created excess reserves that flow into the commercial banks (for which some variant of the so-called "ceiling reserve" plan might be used so that reserve requirements would rise automatically as required by the new money creation). Realistically, the choice between the two methods could best be made on grounds of expediency. If preserving the present financial arrangements (substantially modified as to reserve requirements) betters the prospects for achieving the over-all plan, loss of direct Reserve bank financing is a reasonable price to pay.

4. Clearly, the present complex debt structure, based on painstaking endeavors to provide "what the market wants," would be inappropriate and unnecessary for fundamentally conceived debt policy. Only one special low rate or interest-free security would be needed for money-creating purposes, the exact nature depending on whether commercial or Reserve banks were used. Ideally only consols, at rates determined basically on subsidy grounds, would be needed for sale to the public, though some variety of public issues could, if desirable, be provided without too serious consequences so long as the amounts of fixed maturity issues were relatively small in the total monetary-stabilization

picture. Utilization of either consols or long-term issues for the public would meet the legitimate needs of such major subsidy-deserving groups as insurance companies and trust funds, and would avoid most of the unpleasant monetary-fiscal control problems associated with the present short-term debt structure.

Ideally, it should be noted, the money-creating federal debt would grow steadily with the expanding economy's need for more money, the growth being determined specifically by the requirements for stabilizing the price index used, but more fundamentally by the growth in the volume of transactions and the public's desire to hold cash. Tax receipts relative to public expenditures could thus gradually decline. The publicly-held debt would grow little if any, depending upon the legitimate subsidy claims of desirous lenders relative to the need for pressure on savers to seek private investments.⁸ The interest cost of the money-creating debt would be very small (either just enough to support the Federal Reserve, under the present anomalous arrangements concerning the Reserve's expenses and earnings, or enough to provide appropriate compensation to the commercial banks). Since the publicly-held debt would be sharply restricted to subsidy-providing issues, interest costs here would also be relatively small. A fundamentally conceived debt policy, therefore, would largely obviate the problem of interest transfer payments that has so concerned adherents of both the "old" and the "new" economics, and would in fact permit a steady reduction of taxes relative to government outlays.

V

The debt arrangements outlined are drastic in their simplicity. They are conceivable only as part of a thorough overhauling of our monetary-fiscal standards and policies. They would require general acceptance of the basic stabilizing function of monetary-fiscal policy, willingness to slough off more of the long-hallowed traditions of "sound" finance, and abandonment of extemporization as the core of government economic policy. But on one fundamental, the traditional financial mores are completely sound. Arrangements for more facile government expansion of the money supply are welcome only if coupled with some specific, firmly adopted, easily understood criterion of fiscal sanity. We badly need, to replace existing Congressional and administrative vacillation and the fortunately waning allegiance to gold, a new "religion" of money, about which public confidence can be rallied and otherwise radical and dangerous public policy can be implemented. If

⁸ Actually much of the existing publicly-held debt could, if desirable, be paid off safely through monetization (refunding into the Reserve banks) to meet the economy's need for a growing money supply.

no perfect religion can be found, we should not ask too much. Price level stabilization, I suspect, may come the closest of any available alternative to fulfilling this need.

In conclusion let me venture one last observation. Though only a fraction of all economists would agree to adoption of a price stabilization guide to monetary-fiscal policy, very few, I suspect, would advocate substantially rising or falling prices, except perhaps to eliminate some of the excesses of the current price situation. A ground swell toward greater price stability is evident, in the profession and out. Within the next two or three years we shall probably have an unparalleled opportunity for the introduction of real monetary stabilization. It would be highly irresponsible for economists not to make a determined effort to find a common ground on which to exert all possible influence toward long-run economic stabilization.

PRICES: WARTIME HERITAGE AND SOME PRESENT PROBLEMS

WAGE-PRICE RELATIONS AT HIGH LEVEL EMPLOYMENT

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During much of the early thirties economic literature was concerned with wage-price relations in the context of a wage rate reduction. While all the theoretical issues have not been resolved, there is now surprising agreement among economists that the reduction of the general level of wage rates is not appropriate *policy* during periods of unemployment. In his preface to *Lapses from Full Employment*, Professor Pigou observed "the form of the book may suggest that I am in favour of attacking the problem of unemployment by manipulating wages rather than by manipulating demand. I wish, therefore, to say clearly that this is not so. In the present state of fact and opinion I am broadly in sympathy with the lines of approach suggested in the White Paper on Unemployment Policy."¹

During the forties the focus of the discussion has shifted, under the press of affairs, to the relation between wages and prices during periods of high level employment. In the absence of controls, wage rates respond to increasing employment, and prices are stimulated by rising aggregate income levels. As a consequence, "in order to *maintain* full employment it is necessary that the money demand schedule for labor shall not merely be high, but shall be continually rising, spiralling upwards forever, so that it keeps ahead of the pursuing wage rate. This entails progressive monetary inflation and so, unless productive technique is improving at corresponding speed, continuously rising prices."² Even if high levels of employment constituted a temporary equilibrium, the volatile character of wage rates and prices might well create subsequent instability.³

Full employment is loaded with inflationary danger.⁴ Any policy directed toward a high level of employment must face the risks of inflation. The fact of labor organizations, and companies with administered prices, constitute the focal points of the main danger of such inflationary wage and price spirals.⁵ In recognizing these dangers on

¹ A. C. Pigou, *Lapses from Full Employment* (Macmillan and Co., Ltd., 1945), p. v.

² *Ibid.*, p. 39.

³ See Joan Robinson, *Essays in the Theory of Employment* (The Macmillan Co., 1937), pp. 3-39.

⁴ Alvin H. Hansen, *Economic Policy and Full Employment* (McGraw-Hill Book Co., Inc., 1947), p. 234.

⁵ William J. Fellner, *Monetary Policies and Full Employment* (University of California Press, 1946), pp. xi-xiii.

the wage side Sir William Beveridge placed "the primary responsibility of preventing full employment policy from coming to grief in a vicious spiral of wages and prices . . . on those who conduct the bargaining on behalf of labour."⁶ The danger on the price side Beveridge would meet by government control in the form of supervision, regulation, or public ownership.⁷

During the recent war period these inflationary pressures were held in check by direct price and wage controls. The critical question for peacetime is whether wage making and price determining practices and mechanics can be developed, in the absence of government controls, that are compatible with stable high level output and employment. A strong case can be made for the view that we face the Hobson's choice of either some form of permanent wage and price controls or unemployment as a check on inflationary pressures.⁸ The sections which follow recognize the dangers and risks inherent in high employment in an essentially uncontrolled economy but they develop a different conclusion.

I. *Instability in the Customary Model*

Stability of employment is supposed to be achieved in the traditional picture of the economy through fluctuations in wages and prices. But the usual picture of the individual enterprise would result in a system of these firms which could only be highly volatile at high levels of employment. Consider three elements in the customary model: the shape of cost functions of individual firms, the shape of supply functions of factors, and the assumption of perfect knowledge.

The cost function of the enterprise is presumed to be such that at high levels of output costs increase more rapidly than output; "... in the short period marginal costs begin to rise at a fairly low level of output, as a result of the limitation of plant and organization, and in any case there must always be some levels of output at which they begin to rise."⁹ Marginal costs and prices rise with increases in output.

The supply prices of factors of production are treated as rising sharply with increases in the quantities demanded. Scarce factors can only be induced into the market at a premium. The absence of perfect

⁶ William H. Beveridge, *Full Employment in a Free Society* (W. W. Norton and Co., 1945), p. 200. Also see British White Paper, *Employment Policy* (The Macmillan Co.), pp. 18-19, and League of Nations, *Economic Stability in the Postwar World*, Part II, 1943, pp. 201-214.

⁷ William H. Beveridge, *loc. cit.*, p. 204.

⁸ Dr. J. K. Galbraith in the preceding paper takes this position. "The view that high employment and stability are compatible he characterizes as the pursuit of a mirage of the 'equilibrium system.'" The choice posed in the text is set forth in much of the literature cited in the preceding footnotes.

⁹ Joan Robinson, *The Economics of Imperfect Competition* (Macmillan and Co., Ltd., 1934), p. 50.

knowledge and the costs of movement result in bottlenecks; "... labor is not uniform or fluid, ... in consequence shortages are likely to arise before full employment is reached. ..."¹⁰ The lack of mobility—geographical and occupational—results in rising costs.

The assumption of perfect foresight of the future and perfect knowledge of the relevant magnitudes has obscured the problems of adjustment of wages and prices at high levels of output and employment. Price system adjustments that are instantaneous and directly equilibrating may yield stable employment. But consider the impact of errors of knowledge on the path of adjustments. At moderate levels of output errors may create no serious distortions. At the explosive condition of high level employment, particularly with sharply rising cost and supply functions, errors which overshoot equilibrium may result in employment patterns which are hardly stable.

The expansion of employment from less than full utilization under the conditions just indicated would be associated with a marked rise in prices and wage rates, quite apart from autonomous increases attributable to the actions of strong labor organizations and companies with wide discretion over prices. Small increases in the level of output would require larger increases in wages and prices. It is indeed fortunate that the economic world appears to have been designed by other than an economist. Let us look at the facts with respect to each one of these three elements.

1. There is considerable evidence to indicate that cost functions are practically linear for levels of output short of full utilization of facilities.¹¹ It must be recognized that the theoretical cost function is almost impossible of statistical approximation. These sample problems may be noted: Is overtime to be treated as a change in factor price or attributed to the effect of output? Is the hiring of less efficient or less well-trained workers at high levels to be regarded as an effect of output?

An historical concept of costs in their relation to output may be more relevant to decisions than the usual conceptual cost function. The decision maker operates on rules of thumb on the way in which total costs actually vary with output in historical time. Factors working in opposite directions are included, such as the effects of overtime, less effective workers and less effective standby equipment (all making for higher costs) and technical change, spreading overhead and other

¹⁰ League of Nations, *loc. cit.*, p. 202.

¹¹ For a summary of the evidence, see, National Bureau of Economic Research, Committee on Price Determination, *Cost Behavior and Price Policy* (1943), pp. 80-113. Also see, R. A. Lester, "Shortcomings of Marginal Analysis for Wage-Employment Problems," *American Economic Review*, March, 1946, pp. 63-82; Fritz Machlup, "Marginal Analysis and Empirical Research," *American Economic Review*, September, 1946, pp. 519-554.

economies of higher output (making for lower costs). Only obvious changes in the prices of materials and supplies and wage rates would be excluded from such an historical cost function and treated separately. The significant point is that there is an imposing body of evidence to indicate, apart from these price and wage increases, that output can be pushed to capacity in many modern industries under conditions approximating linear cost functions. This fact is decisive for the problem at hand.

One of the deep-seated notions of economic analysis is that an expansion in employment can only take place with a drop in the real wage rate.¹² The view is classical in origin. Keynes accepted the conclusion in the *General Theory*.¹³ But experience in the cycle indicates otherwise; employment can be expanded to high levels with no drop and even a rise in the real return per hour of labor. This result follows, not merely from the shape of the typical cost function, but also from the timing of technical change and the way in which hourly earning changes are geared to changes in output, a point developed in the next section.

2. The supply functions of factors in the real world are in many cases significantly different from the presumptions of the textbook. The labor union sets a wage in bargaining which during the contract year shall apply to all employees, present or prospective. Under the closed shop the union attempts to furnish wage earners at the bargained scale. In many cases it may incur considerable expense to do so. The area of administered prices operates in the same way.¹⁴ It is primarily in the field of raw materials and agricultural products that supply prices increase markedly with an expansion in output.

Moreover, the short run and the long run of economic analysis are intertwined in the historical process. Significant expansion in plant and capacity can be made in relatively short periods. There is a good deal of evidence on the way in which costs vary with size of plant indicating constant, if not falling, costs for most ranges of output.¹⁵ The fact of fluctuating output in our economy has led to the construction of facilities and organizations which have remarkable flexibility in out-

¹² The term refers ordinarily to the quotient of money wage rates and the cost of living. It may sometimes refer to "product wage rates"; that is, to changes in money wage rates corrected for the selling prices of the industry paying the wages. See, William J. Fellner, *op. cit.*, p. 97.

¹³ J. M. Keynes, *General Theory of Employment Interest and Money* (Harcourt, Brace and Co., 1936), p. 10. See Joan Robinson, *Essays in the Theory of Employment*, p. 37. Keynes reformulated his views in, "Relative Movements of Real Wages and Output," *Economic Journal*, March, 1939.

¹⁴ "[Sraffa] was concerned to show that economists who make use of the competitive analysis of value have a strong unconscious bias in favor of rising and falling supply price, simply because, if supply price is always constant, their analysis has nothing interesting to say." Joan Robinson, *The Economics of Imperfect Competition*, p. 118.

¹⁵ *Cost Behavior and Price Policy* (National Bureau of Economic Research), pp. 219-263.

put at relatively constant costs. Mention should be made of the tendency to develop machines or plants in units which can be turned off or on.¹⁶ Shift operations in other than continuous industries also contribute to this flexibility.

3. The introduction of uncertainty and imperfect knowledge regarding the future raises serious questions concerning the effectiveness of wage and price fluctuations to achieve stable high level employment. We enter the world of varying elasticities of expectation.¹⁷ Wide fluctuations in wages and prices may in themselves create such uncertainty that output and employment may be inhibited. A steadying influence on output and employment is exercised by relatively inflexible prices (arising from "the sleepy sort of monopoly which does not strain after every gnat of profit, but prefers a quiet life").¹⁸ Steady wage rates play the same role. The certainty that wage rates and price levels will be relatively constant in the months ahead is a factor tending to facilitate the making of commitments. Moreover, as Professor Hicks has indicated, the only reliable check within the system against downward movements in prices is the rigidity of wage rates.¹⁹

These three aspects of the real economic world yield a composite view in which there is less danger or chance of inflationary wage and price movements at high levels of employment than under the customary model. The possible stability in employment at high levels has not been established. Rather some of the underbrush, nurtured by the profession, has been removed to get at the central difficulty—the danger of autonomous wage and price increases.

II. *The Administration of Wage and Price Structures*

This section is concerned with the importance and use of wage and price *structures* in the modern business enterprise. Each firm is typically confronted with the task of administering²⁰ a wage and price structure. The wage scale and the price list are bargained or determined at infrequent intervals, such as once a season or year. The enterprise administers these wage and price schedules from day to day. The results of these operations significantly affect the actual costs and revenue per unit.

There are important sectors of the economy which do not fit this picture. They are the traditionally competitive areas with highly flexible prices. The relation of these flexible prices to stability of high

¹⁶ George Stigler, "Production and Distribution in the Short Run," *Journal of Political Economy*, June, 1939, pp. 305-327.

¹⁷ John R. Hicks, *Value and Capital* (Oxford, 1939), pp. 258-272.

¹⁸ *Ibid.*, p. 265.

¹⁹ *Ibid.*, p. 269.

²⁰ The term has been adopted from National War Labor Board, *Wage Report to the President on the Wartime Relationship of Wages to the Cost of Living*, February 22, 1945, Appendix D, by George W. Taylor, p. 76.

level employment is considered at the end of this section. Here we are concerned with administered prices and wages.

The wage structure of an enterprise is composed of at least a list of jobs with the applicable wage rate per hour or piece. In many situations this rate may be a rate range with a maximum and minimum for the job. The wage structure also includes the complex of penalty and overtime rates for shifts, holidays, and other working conditions. Under incentive plans the provisions for performance over standard must be included. The enterprise has the possibility of varying the relative number of man-hours used at each rate. Day-to-day decisions on transfer and promotion, training and hiring, lay-off and seniority procedure, and job assignment (in fact, all decisions affecting industrial relations and production) will have their impact on average earnings and wage costs. These factors may frequently be more important than changes in the formal level of wage rates.²¹

Two enterprises may administer the same rate ranges—incentive systems and premium or penalty rates—in quite different fashions. They may also have quite different industrial relations and production policies. The wartime experience, which exaggerated most problems, showed that identical rate structures could yield earnings per hour and hence labor costs which varied as much as 50 or 75 per cent. The enterprise—and the union as well—actually has two shots at the effective wage: one in negotiations over the level and the other in the day-to-day administration of the wage schedule, subject to the processes of collective bargaining.

The idea of administering a price structure of the enterprise is just as essential to an understanding of wage-price relationships.²² The typical enterprise is a multiproduct firm. A schedule of prices or formulae for computing prices provides a price for various major products and lines, a set of differentials for size, grade, quality, location, etc.; and a discount or extra system for time of payment, delivery, repair, or replacement, etc. The enterprise must be treated as administering this price structure on a day-to-day basis. The material, labor, and machine resources available to the firm may be shifted among groups of "products," or finished goods may be shifted among differentiated markets, to yield substantially different revenues.

This is not to say that the enterprise has complete discretion as to the shifting of resources among products or in choice of markets. Many of these shifts are dependent on the decisions of customers and may be correlated with changes in the level of income. The case is analogous

²¹ The concept of administering a wage schedule may even be applied to the situation in which the enterprise has no formal rates but simply personalized and individually bargained conditions of employment.

²² Richard B. Heflebower, "The Effects of the War on the Structure of Commodity and Labor Markets," *American Economic Review*, May, 1946, pp. 52-59.

to the administration of the wage schedule in which there are typically collective bargaining limitations on the discretion of the firm.

While economists have frequently been concerned with the problem of the relative levels of prices charged by a firm able to discriminate among groups of buyers, they have seldom seen the problem of the enterprise as a whole adjusting and readjusting its flow of sales with a fixed schedule of prices. The whole point may be expressed statistically; the enterprise with temporarily fixed wage and price schedules may shift the weights in each schedule affecting total costs and revenue and hence profits. Just as we have noted that physical plant is built to accommodate costs to fluctuating output, so business enterprises have contrived wage and price schedules which facilitate some adjustment in hourly earnings and revenue to changes in aggregate demand.

The practices encompassed by this phrase—the administration of wage and price structures—tend to insulate the system in a variety of ways from the impact of an expansion in aggregate demand. Minor changes can be made at points in the wage and price schedules without setting in motion seriously cumulative processes. A special discount may be given or removed; an “extra” may be increased; a wage rate increase may be granted for a particular job classification with a change in job content. Special operating and marketing problems can be met and at the same time the area of any dislocating effects can be minimized. Changes in effective profit margins can be achieved without the formality of changes in any listed prices or wage rates by shifting employment and sales weights. Price changes in the ordinary sense can be postponed deferring cumulative movements. Some flexibility is achieved in the relation of wages to prices and in the adjustment of both to income changes that is more or less automatic. The impact of higher hourly earnings brought about by an increase in the proportion of workers at higher effective rates may in part be offset with changes in revenue automatically associated with higher levels of income.

A recognition of the fact that changes in hourly earnings and revenue can be brought about through the administration of wage and price structures is essential to interpret the war period. The increase in gross average hourly earnings relative to basic wage rate schedules in any enterprise during the period 1941-45 is only to be understood in terms of the shift in the importance of high paid jobs, merit increases, the effect of piecework earnings, and the greater importance of penalty and overtime rates. Wage structures were administered so as to yield these higher earnings. Had these developments not taken place, much larger changes in basic wage rates would no doubt have been necessary. In the same way, profits reflected more than increased output and improved margins as measured by wage and price levels. Profits in-

creased substantially because of the shift of output to higher profit items.

This section argues that enterprises administering wage and price schedules may push output further without formal revision in wage and price lists than would be the case if each firm had a single product and employed a single type of labor. Increases in scheduled wage rates and prices are apt to be particularly contagious. Moreover, wage and price leadership are highly developed in many sectors. The administration of these structures provides a cushion to the impact of inflationary tendencies. It may be contended that these changes in wages and prices within the structure are just as inflationary as any other. The significant point, however, is that within certain limits the administration of these structures cushions cumulative effects and provides flexibility that could not otherwise be achieved without serious repercussions.

If the area of administered prices serves in some respects as a barrier to cumulative changes in price and wage schedules at high employment, what of the more competitive area of the system characterized by flexible prices? Prices in this sector, illustrated by agricultural products, have risen sharply in periods of high incomes and have fallen precipitously with low income levels. This behavior creates many difficult problems for stability of employment. Because of the importance of food in the budget of wage earners and the effect of cost-of-living changes on union wage policy, these flexible prices alone may induce serious increases in the whole wage and price levels. The area of administered prices might remain unchanged at full employment but wage rates could start to rise sharply through the influence of the flexible prices on living costs.²³

These dangers to stability which inhere in the first instance in the competitive sector are not to be taken lightly. There are numerous political signs, however, that in the years ahead agricultural prices will be prevented from falling to the depths they have in the past either by moderate levels of aggregate demand or by direct government intervention in these markets. In either case the magnitude of rise in agricultural prices as employment reached high levels could then be expected to be less pronounced. Moreover, the markets between agricultural products and the final products entering the cost of living to wage earners permits some considerable adjustment in agricultural prices before becoming seriously infectious on wage levels.

III. *The Area of Decision Making*

The stability of the system is affected by the area of the economy included in single wage and price decisions. Wage rates would move quite differently at full employment depending on whether the wage

²³ The distinctions in meaning of "real wage" pointed out in note 12 above may be quantitatively quite important in short periods.

level was bargained on a national basis for all unions and managements, or an industry-wide basis, or solely in separate plants and firms. The wider the area of bargaining the less likely for bottleneck and strategic groups of employees and managements to set in motion wage increases that would spread rapidly to other groups. The superior bargaining power of these favorably located employees and managements is offset in part or averaged out in a wider bargaining unit.

Recent years have witnessed both an expansion in older bargaining units and the emergence of collective bargaining in many new areas in which negotiations have been conducted on a multiplant basis.²⁴ Account must also be taken of instances of wage leadership where the wage rate change agreed upon by the leader becomes the "pattern" for the industry or locality. Most of the actual process of wage determination lies between the poles of formal association bargaining and wage leadership exercised by key bargains. The unionized sector of the economy has become so large and the task of staying unorganized so difficult that wage rates under collective bargaining may be said to determine wage rates throughout the industrial sector of the system.²⁵

There are consequently a limited number of key bargains which decisively determine the level of wage rates in the industrial sectors of our system. While the steel and coal bargains may be more important than others, a list of twenty-five to fifty key bargains would determine to a very high degree, through the processes of wage leadership, both the level and industrial structure of wage rates. In interpreting this statement it is important to avoid the dual fallacies that wage rate differentials among bargaining units are completely inflexible or that there are no key wage changes which are highly influential on other wage bargains.

The timing of wage rate changes is a major problem for stability of employment. The growth of multifirm bargaining tends to make for uniformity in the timing of wage rate changes even if wage rate levels are not necessarily equalized among the component firms. The characteristic term of the agreement—a period of a year—also tends to introduce stability in the wage structure in response to increases in employment and aggregate demand. The device of the contract with re-opening clauses is primarily a wartime expedient. Certainly in peacetime the key bargains are for fixed terms, typically for a year. Thus the length of the contract, the growth of multiplant bargaining, and the fact of wage leadership all tend to make for relative constancy in wage rates with an expansion in employment.

²⁴ Richard A. Lester and Edward A. Robie, *Wages under National and Regional Collective Bargaining, Experience in Seven Industries* (1946).

²⁵ John T. Dunlop, "American Wage Determination: the Trend and Its Significance," *Wage Determination and the Economics of Liberalism* (Chamber of Commerce of the United States, 1947), pp. 34-48.

But the devil must have his due. The growth of large and powerful or strategic labor organizations in collective bargaining threatens stability at times when the contracts expire. The union-wide or the multi-plant bargaining unit shutdown in critical sectors not only directly threatens high production but such stoppages create cost and price distortions. Furthermore, and this is the critical point, the bargaining may result in wage increases which when diffused throughout the system lead to an increase in the price level. This possibility is even more imminent in view of the fact that the enterprises bargaining with these unions are favorably situated in their product markets to pass through such cost increases. No one has stated these dangers more incisively and cogently than Henry Simons: "Every organized group of sellers is typically in a position to gain by raising prices and restricting sales. . . . Monopoly power must be abused. It has no use save abuse. Some people evidently have believed that labor organizations should have monopoly powers and be trusted not to use them."²⁶

There are two respects in which the experience since the end of the war has seen these dangers in particularly grotesque form. First, the fact of inter- and intra-union rivalry may result in labor organizations using wage rates for purposes that have essentially nothing to do with any consideration of effects on prices, output, and employment. The union may even recognize fully the reality of adverse economic effects. But the desire to use wage policy for organizing purposes or as a tool in an inter- or intra-union fight may assume larger importance to the union officers and the rank and file. There have been important cases during the past year in which employers have used wage policy to favor one labor organization as compared to another.

Second, the organization of employers into effective bargaining groups is only now growing apace of labor organizations. The managements of the country have been slow to develop effective multifirm bargaining agencies with appropriate technical and professional resources on a scale to bargain with the international labor organization. There are many indications that this apparatus is emerging.

The net result of these opposing effects of the expansion of the area of bargaining in wage determination on stability is not readily apparent. Judgments will differ widely, and at times violently. The practical problem of public policy making, however, is to seek out ways in which the inflationary effects may be mitigated. Eventually it may be demonstrated by experience that some public wage and price brakes are required if a high employment economy is not to destroy itself in discordant increases in prices and wages. However, there can be little support for such a program until we have had greater experience

²⁶ Henry C. Simons, "Some Reflections on Syndicalism," *Journal of Political Economy*, March, 1944, p. 6.

and have made greater effort at more voluntary measures.

The whole problem may be viewed as that of securing attention for longer-run considerations in wage and price making. This is no more economic preachment than it is attention to self-interest, if either label affects your judgment. Experience shows that price increases for the maximization of immediate or short-run profits will result in rising wage rates and instability. Experience also shows that the extraction of the maximum immediate wage increase under conditions of high level employment will lead to inflationary price increases.

If wage and price policies are to contribute to stability there must be widespread public discussion of the current position preceding negotiations and price determination. The occasion of the annual report of the Council of Economic Advisers might be developed to provide extensive background discussion on the part of the interested segments of the community as setting for the particular decisions. These public reviews of all the facts pertinent to an appraisal of the economic outlook could be used to improve the climate in which wage and price setting is made.

IV. *Summary*

A postwar boom provides a misleading setting in which to appraise the prospects of protecting high level employment in more normal peacetime from inflationary pressures. The volume of deferred consumer good demand in textile products and durable items was unique. The extent of accumulated savings and liquid assets provided an exaggerated inflationary stimulus. A prolonged period of wage and price control created needed readjustments of prices and wage rates in a free market. The psychological repercussions of this release are not apt to be duplicated, particularly in the labor market with the expiration of the no-strike pledge. There have been sharp changes in tax rates. The period has presented extreme and intensified conditions which must not be used to project the peacetime problem.

The maintenance of stable high level employment is the crucial problem of the generation. The danger of deflation and underemployment is persistent. No less important is the issue whether wage and price increases at high employment may destroy prosperity. This paper has considered three groups of conditions which lead this observer to suggest tentatively that the inflationary dangers can be confined: (1) The economic world provides technical arrangements of production that permit output to be pushed to high levels without marked increases in costs and prices. (2) The administration of wage and price structures typically permit adaptations in earnings and revenue without transmitting changes in price schedules. (3) The expanding area of bargaining over wage rates permit a greater stability in the level of wage costs.

DISCUSSION

CORWIN D. EDWARDS: Mr. Dunlop addresses himself to the problem whether wage increases lead to an inflationary spiral. He believes that they need not do so because of peculiarities in the behavior of costs, the administration of price and wage structures, and the scope of wage bargains, which are not taken into account in such analyses as that of Professor Pigou. I must resist the temptation to shoot at Professor Pigou over Professor Dunlop's shoulder. Nevertheless, the inflationary spiral of wages and prices does not appear to me to present a problem in the real world, for reasons somewhat different from those advanced by Professor Dunlop.

It is obvious that the differential bargaining strength of labor groups may force wages up at particular points in the economy and thereby create dislocations, first in relative wages and subsequently in relative prices. Obviously perturbations may result until new tenable ratios are arrived at. It is also obvious that a general wage increase may in part become illusory because of a subsequent general price increase. But neither of these two developments gives us an inflationary spiral. For such a spiral, it would be necessary that labor generally have such a bargaining advantage over employers as to enable it to raise wages, and that those employers, in their capacity as vendors of goods, then attain such a bargaining advantage over consumers as to enable them to make an offsetting, or more than offsetting, increase of prices. This alternation would need to appear recurrently without a substantial break in the power of any of the labor groups or any of the suppliers of goods; for if there were such a break, forces tending to terminate and reverse the upward spiral would be released.

Talk about this kind of economic pattern is produced by war and postwar adjustments, during which large amounts of purchasing power are available from other sources than the contemporary distribution of incomes through business processes. We have no experience of inflation through wage and price increases in times of peace. Rather, our experience shows that the reciprocal increases characteristic of the business cycle are self-terminating and self-reversing. It may be that Mr. Dunlop uses the term inflation to include the cyclical rise, and that the problem whether wage and price increases may destroy prosperity should be read as the old problem whether business booms generate business depressions. However, parts of his argument appear to be directed toward larger-scale inflations and toward high levels of employment other than those which are characteristic of the top of the business cycle.

Although I agree with Professor Dunlop that reciprocal wage and price increases need not produce inflation, I cannot accept his apparent belief that collective bargaining and the growth of administrative power to control prices are factors which promote full employment. Apart from any effects produced by untenable wage and price relationships, full employment is likely to be made impossible through the means which the business and labor groups employ in establishing their power and in asserting it upon market bargains. At the moment we are all aware that large-scale strikes diminish aggregate productivity and employment. We are traditionally aware that the restrictive

tactics through which business monopolies raise prices have the same direct effect. Indeed, the direct restrictions of the private monopoly rather than the unbalance this monopoly introduces into the price structure supply the basis for American antitrust legislation. Moreover, both in business and in labor, a power group can establish and maintain itself only by asserting an exclusive jurisdiction over some field of economic activity and resisting the entry of outsiders into that field. Jurisdictional claims and interferences with the movement of men and resources from one market to another constitute trade barriers inconsistent with the flexibility necessary to full employment.

To say this is not to assert that we can have completely atomized competition, nor even that to have it would be desirable. However, movement away from automatic adjustment toward organized tests of strength between powerful bargaining groups is in itself a force adverse to full employment, apart from the price and wage relationships which may be established in the bargaining process.

MELVIN G. DE CHAZEAU: In his paper, Mr. Galbraith¹ sets out explicitly to "idealize the system of war organization we have just dismantled." My general criticism is that he succeeds too well. Price control, in its idealized armor, is too dazzling. There is too much black and white in the contrasts between "pro" and "anti." If memory serves me, the predominant color was grey. His paper, therefore, gives a dubious sense of complacency in the record.

Take for example the contrast between those who supported what Galbraith terms "the equilibrium system" approach and those who pioneered the "disequilibrium system." Now, this may properly describe the theoretical and philosophical birth pangs of general price control. From some of Galbraith's remarks, I conclude that I speak as a layman—to a convention of the midwives of price control! But from the relative obscurity of the National Defense Advisory Committee and the Office of Production Management, I would hardly have described the opposing forces in Galbraith's words.

True, almost from the beginning, there were two quite different schools of thought with respect to appropriate policy: those who emphasized the need for higher taxes combined with methods to induce or force increased savings; and those who emphasized the need for direct controls. In the early period (1940 and 1941), the former derived great strength from the conviction that there was an enormous amount of "slack" in our system of production; from the picayune size of actual or officially contemplated military requirements in comparison with production potentials; and from the natural hesitancy to shoulder a task so stupendous as the direct control of the American economy, especially in the then state of lack of information, or to advocate such a radical move in a political milieu that would not stomach even the mention of a "war" effort. These were the days of the "guns and butter" philosophy and of the "defense" program. I still recall that when we first challenged the adequacy of steel capacity (December, 1940), industry representatives—with the assurance of the admirals who later could wipe out the

¹ To be published in the *American Economic Review*.

Jap fleet any Thursday morning before lunch—could rightly claim that total annual military requirements could be rolled in a few days. We had to base our recommendations on the derived civilian demands for steel as incomes rose!

Despite the official position, some were more prescient than others and there was already a marked jockeying for position between and among both the old-line and the new embryonic agencies. If memory serves me, OPA was not entirely aloof from this struggle for strategic position!

My own conclusion would be that many, then and later, doubted the relative efficacy of general price control. But differences were matters of degree and of the relative importance of alternative devices. Once we were in the war, I know of no substantial professional opinion that we could avoid inflation under an equilibrium system, as described, by any politically feasible amount of taxation or income control.

We come now to the major thesis of Galbraith's paper: that the proper standard for appraising the effectiveness of wartime general price control is not the behavior of the price indices but rather the performance of the system of war mobilization as a whole in which it played an important part. That this is an appropriate standard, I agree; but my agreement places me in the "absurd" position of suggesting that Mr. Galbraith's paper is not too long but too short! The standard that he would apply avoids none of the imponderables that bedevil the price indices. I refer, of course, to problems posed by upgrading of products and of labor, by quality deterioration of products under the same name and of labor in terms of productivity at the standard wage, and of product differentiation through which ceilings could be eluded. It does, however, drag in some formidable imponderables of its own—largely unanalyzed in Galbraith's paper. For example, to what extent was the apparent effectiveness of price controls dependent on or a reflection of other direct controls of production and distribution? Again, Galbraith observes that price control avoided the *immediate* effects of inflationary pressure from inducement wages and inadequate taxation. To what extent did the apparent effectiveness of price controls undermine or anesthetize alternative measures of reducing the impact of inevitable wartime inflationary forces on the economy and so store up more trouble for the postwar period?

It is obviously beyond the time limitations of this discussion to supply these deficiencies. But I will list a few items—more particularly some that were important during the war but radically altered at its termination—which Galbraith fails to appraise and which, for that reason, may account for a too easy conclusion that deterioration of price controls after V-J Day was not necessary.

Beginning in the spring of 1941, there was a welter of conservation and limitation orders that forbade the use of scarce materials in designated products, curtailed and forbade expansion of civilian production facilities and construction, restricted output of civilian goods, and eventually prohibited production of many consumers' durable and consumers' hard goods. Priorities and allocations directed scarce materials and components to specified purposes.

By a combination of labor referrals, placement of war contracts, and allocation of materials, direct control of labor was avoided, but the demand for and use of labor was nevertheless indirectly and persuasively affected.

These and similar direct controls were not designed specifically to support price controls (integration of interagency activities is not exactly a natural Washington trait!); but, combined with the excess profits tax on the one hand and the producer's opportunity on the other to avoid the vicissitudes of civilian production by shifting to war production, they took much of the "heat" off price control. More specifically, at many vital points they eliminated competitive bidding, simplified and standardized products, limited production of high-priced and required a modicum of low-priced goods, severed traditional producer-customer loyalties, and submerged civilian new-product development and civilian plant expansion. Thus, competitive incentives were divorced from long-range considerations of proper pricing patterns and company good-will. In the shorter perspective of wartime, *over-all profits* became an adequate incentive for continued production.

Under this criterion, quite apart from partial or full conversion to war production, wartime standards of civilian price controls were hardly exacting. By adroit shifting of production weight among items within established price ceilings (to which Dunlop has just called attention in another context); by exercising the American genius for product differentiation; by quality and service changes; by reduction in selling costs and stepping up of inventory turnover; by practical elimination of the costs of unsold or unsalable merchandise—civilian manufacturers and distributors struggled along, by and large, quite profitably whether price ceilings were fair or not!

Finally, we cannot ignore the widespread social recognition of the emergency and of the need for drastic, if unpalatable, action if we were to win the war. True, we made it easy and profitable to heed these social pressures. (*Real* civilian incomes for example continued to rise to 1945!) But patriotism was no monopoly of those, in or out of Washington, who labored to devise and administer controls over the rest of the population. The point is important because the controls (price or production and distribution controls) were crude, especially in the beginning. The meat axe, not the scalpel, was the instrument at hand. That they were accepted and honored as widely as they were is not so much a tribute to their theoretical or mechanical perfection as it is to this general recognition and support of their basic purpose.

Public acceptance of the principle of control was the cement that held the structure of controls together. As it lost its cohesive power—almost as soon as victory became relatively certain—the structure began to crumble.

These forces are the more important in appraising price controls and especially the postwar continuance of price controls because they faded as the emergency passed. Peacetime markets revived long-range competitive strategy and reaffirmed the need for greater flexibility in pricing and in the execution of production plans than direct controls would permit. (Not *old* patterns, no matter how well patched up, but new pricing patterns were crucial.) Controls were increasingly irksome with the cumulated annoyances

and maladjustments of the war period. But, most important of all, the relative simplicity and acceptability of wartime criteria of essentiality were gone. In a peacetime market there was no generally accepted standard of relative importance or urgency.

There were many reasons for deterioration of price controls after V-J Day. Prominent on any list must be the adjustment of official policy to a mistaken economic forecast of deflation rather than inflation and the unresolved ideological conflict between top leadership of WPB and OPA with respect to the function of WPB controls in a reconversion period. But in the same bracket must also be noted OPA's failure to adjust rapidly enough either its criteria or its control instruments to the revised margins of tolerance permitted by the new climate of opinion and the new economic needs of the period.

In conclusion, I have not argued that deterioration of price control after V-J Day was either necessary or desirable. Indeed, I am on record to the contrary. I do maintain, however, that by neglecting the kind of considerations to which I have called attention, Galbraith has oversimplified his appraisal of the effectiveness of price control in wartime and of its deterioration thereafter. For one, I consider the fact that we had achieved "the largest expansion in national products in history" under "more stringent controls" irrelevant for the proposition that price and production controls would inhibit production in peacetime; and the fact that we were currently operating in a state of full employment is, at best, equivocal.

ELMER J. WORKING: I have found Dr. Galbraith's paper interesting and stimulating. Some parts of an earlier draft were rather more stimulating than the part he presented at this meeting—stimulating in much the same manner that a red flag is stimulating to a bull.

What Dr. Galbraith has said must nevertheless be reckoned with by anyone who attempts to appraise the significance of price control during the second World War. He forthrightly states that he has attempted "to idealize the system of war organization," and in the light of that idealization to appraise "the performance of the actual system, primarily . . . in the way it made use of price control."

But I doubt that most economists of today, or of any future time, will concur in all of Dr. Galbraith's idealization. He was too close to the development and the implementation of the price control policies to view them with the perspective necessary for objective appraisal. Price control of World War II was largely his child, and where is the parent who can appraise the accomplishment of his own child in a thoroughly detached and unprejudiced manner?

I noted the statement that "before the war most economists would have rejected general price controls as an instrument of control and all but a minority would have looked upon an excess of aggregate demand over supply as an evil to be avoided at all costs." I do not find it at all surprising, nor at variance with the prewar "economic pedagogy," that direct price control and

rationing were able to hold inflation in check during the war. In order to refresh my mind as to my former views on this point I turned back to some of my prewar writings.¹

I found the following written in October, 1940:

Unless sufficient measures are taken by the government to avoid it, price inflation will probably be under way within the coming year. . . . To prevent inflation, taxation and savings of individuals in the United States must be increased by approximately the same amount as are the expenditures for war goods. . . . Of course, price fixing by the government may play an important part in checking inflation. But if taxation and voluntary savings do not increase rapidly enough to offset the increased expenditures for war goods, some system of rationing or other method which would involve enforced savings would be necessary to enforce price fixing.

Price control and rationing, then, provided a form of enforced savings. Although effective for the duration of the war, I believe it was bad policy, both from the standpoint of economics and from the standpoint of the long-time political welfare of the party in power, to depend so largely upon this type of enforced savings. It resulted in an excess of purchasing power which constantly overhung the market and assured further price inflation the moment controls were relaxed after the war. The "disequilibrium system" which Dr. Galbraith has idealized provided no feasible means of "restoration of prewar status, property rights, and functional mechanics" without going through a marked price inflation.

I do not mean to minimize the very great accomplishments of OPA. Although given the task of preventing inflation, its powers were ill-adapted to the purpose. It had no control over the fundamental causes of price inflation. It could only fight a delaying action, and this it did valiantly and with much success in view of the conditions under which it operated. Certainly the great majority of economists connected with OPA realized that the agency was sure to be the target for criticism and to be discredited in the eyes of most people. Nevertheless, they realized the vital importance to the war efforts of doing whatever they could to prevent inflation. For this Dr. Galbraith and many other employees of the OPA are to be congratulated.

But we are not here concerned primarily with appraising the effectiveness of the work of those who were in OPA. We are concerned rather with appraising the satisfactoriness of the "disequilibrium system." It is my contention that we should have been much better off if the main burden of controlling inflation during the war had been borne by fiscal and banking measures designed to control inflation at its source, and if direct price control had been left free to be used primarily as a means of directing the production and consumption of goods. Of course direct controls such as priorities and allocations would also have been necessary, but the need for them and for rationing would have been greatly reduced during the war. Furthermore, a large share of the postwar inflation would have been avoided by such a system.

In this connection it should be noted that although the methods of price

¹ I began writing about the dangers of inflation in *Illinois Farm Economics* as early as November, 1939. The views there expressed I did not then, and I do not now, think were out of harmony with the ideas of many other economists.

control largely destroyed the effectiveness of the system of money prices to guide the consumption of foodstuffs, there was set up another price system to take its place—the system of point rationing which was an equilibrium system. Consumers were given a fixed income of ration points and the point values (prices) of the different articles were adjusted from time to time to adjust consumption. One of the difficulties of this system was that consumers could buy food without points, both in the black market and openly in restaurants. The effectiveness of the ration point system was, as Dr. Galbraith points out, partially destroyed when there was an overissue of ration points—when, in other words, it was no longer in equilibrium.

I challenge the idea that "excess demand" was necessary or even largely helpful in getting full production. The selective service system with its deferments for essential war workers and the patriotism of the people were far more important than high wages in causing workers to shift to the war industries.

I can see some justification for the criticism of certain Department of Agriculture officials in their conflicts with the OPA. However, it must be borne in mind that the Department of Agriculture was charged with the responsibility of encouraging the maximum production of needed agricultural products, and that an important means of attaining that end would have been price control—a very different sort of price control than that to which OPA was committed.

The existence of the conflict does not so much imply fault on the part of either Department of Agriculture or OPA officials as it does a difficulty with the disequilibrium system and the direct controls by the government over the economic welfare of large groups of its citizens which that system entailed. Such a system encourages some government officials to seek to extend their powers, and political pressure groups are prone to exert their influence to have the power over themselves allocated to those agencies most disposed to favor them. It was not only in the OPA-Agriculture controversies that intergovernmental power politics appeared. It was to be found within OPA itself, between OPA and WPB, and between OPA and the various agencies interested in labor, to name only a few of the more important points of conflict.

There is even some evidence to suggest that the extent of the disequilibrium between purchasing power and goods was influenced by a conflict between governmental agencies for power over the wartime economy. In any event some high officials of the Treasury were very much irked by Mr. Henderson's failure in the fall of 1941 to support their proposals for anti-inflationary taxes. On November 5 of that year Mr. Henderson addressed a memorandum to the Supply, Priorities, and Allocation Board entitled, "How Fiscal Policy Can Aid the Work of the SPAB." As anti-inflation measures these proposals were much milder than those of the Treasury. Later, after the new price control law had been passed by Congress and the Treasury had modified its tax program in the light of the opposition of other governmental agencies, Mr. Henderson's views were different. On March 2, the day before the Treasury's revised program was to be presented to the Ways and Means

Committee, Henderson wrote to Secretary Morgenthau urging a compulsory savings plan to raise 5 to 6 billion dollars more than was proposed by the tax program. Whether such changes in OPA's position on taxation and compulsory savings policy were merely the result of conflicting and changing opinion within OPA, or whether it represented a jockeying for position to gain authority over wartime price control is not clear to me. It is clear, however, that the passage of OPA's price control act weakened the willingness of Congress to meet the problem by appropriate fiscal and banking policies. Some members felt that once they had passed the Price Control Act that ought to be enough to control inflation.

Special attention should be called to Dr. Galbraith's treatment of the control of wage goods versus nonwage nonwar goods, and nonwage war goods. He holds that strict control of wage goods was essential in order to prevent a rise in them from causing a rise in wage rates, but that in the case of nonwage goods, especially war goods, control was less necessary. He seems to have missed the fact that wage rates in manufacturing rose more rapidly than the cost of living—that wages were bid up in the more profitable industries, and that this in turn focused them up in other industries. The fight of OPA in the summer of 1942 for price control over airframes was made necessary because there was then no wage control program. It was this fight which forced the issue and was responsible for the adoption of the wage controls which were so essential to checking the course of inflation during the remainder of the war period.

From the standpoint of the postwar price levels, the significance of preventing rises in prices of the three categories of goods is almost the precise opposite of that which Dr. Galbraith has indicated. Wage rates are among the most inflexible elements in our price structure, whereas food prices which form a large share of the wage goods are highly flexible. It is my opinion that the level of prices during the next decade or so will depend largely upon the extent to which wage rates were permitted to rise during the war and the early postwar period.

I am disposed to accept Dr. Galbraith's opinion that the performance of the wartime system of controls should be measured in terms of the over-all performance of war production rather than merely in terms of the behavior of the price indexes during the war. One of the reasons for this, however, is the misleading character of price quotations and price indexes during the war period due to (1) black markets, (2) subsidized prices, and (3) the lack of prices for most war goods in the price indexes. In addition to the officially subsidized prices, prices of most manufactured commodities for civilian use were subsidized through the prices and profits realized on war products. It was part of OPA's policy to require this hidden subsidization.

It should also be pointed out that even though one accepts over-all performance as a criterion, it is still pertinent to inquire whether that production was attained because of or in spite of the methods of price control. Dr. Galbraith has shown us little evidence to indicate that the performance was improved rather than hindered by the adoption of the particular sort of

"disequilibrium system" which we followed. It is my contention that we would have been better off with less disequilibrium.

MORDECAI EZEKIEL: Behind prices, wages, and profits, increasing and decreasing marginal returns, savings and investment, and all the rest of the abracadabra of business and economic jargon, lie certain physical facts which all can agree on.

1. Society can consume no more than it produces. If real incomes per capita are to rise, real production per capita must rise.

2. Production does not occur solely on farms and in factories. The wheat threshed on the farm is only a small part, economically, of the bread which reaches our table. The automobile assembled at the plant is only one item of the daily trip to the office in a motorcar or bus. Besides factory workers, many other less conspicuous workers, in transportation and merchandising and services, contribute to the end product at retail—including the mailman, the policeman, and even the schoolteacher.

3. As technology advances, striking increases in physical output per hour can and do occur in certain stages of the productive process—in rolling steel strips, for example, or in honing an auto cylinder. The workers in those particular industries whose output is miraculously multiplied are not therefore more worthy than workers in older industries less susceptible to change, or in service and professional occupations less adapted to mechanization.

4. If an economic society is to retain balance while the real average output per worker increases, all useful workers should share in that increased output in some degree, with the rewards varying only enough to insure sufficient mobility between occupations and skills, and with differentials to reward variations in training, abilities, and applications. To concentrate all reward for increased output in the incomes of the businessmen and workers fortunate enough to be occupied in the technologically fruitful fields would set up constantly increasing disparities, inequalities, and stresses in the society. What happens to profits—the wages of business—is just as much a matter of public concern as what happens to prices and wage rates.

5. It follows that the larger part of increasing real over-all output per hour per worker (which in our society in recent decades has averaged about 3 per cent per year¹) should be currently reflected in rising real incomes for all workers, either by raising wages or incomes, reducing prices and costs of living, or both. Rising output is the only continuing factor from which rising real wages can come. If *all* corporate profits had been paid out as an addition to the wages and salaries paid by corporations, wage rates (for selected peak years) would have been 22 per cent higher in 1929, 15 per cent in 1940, and 10 per cent in 1945 (profits after taxes in this last war-boom year).

¹ Calculated from output data in L. H. Bean, "Postwar Output in the United States at Full Employment," *Review of Economic Statistics*, Vol. XXVII, No. 4, November, 1945, pp. 202-203; population data; and average hours of work in factories. National output *per employed worker* grew at a rate of 2¼% per person per year from 1900 to 1929, but (judging from factory hours) hours worked per week declined 0.75% per year, so output per hour increased by 3%.

Postwar tax reductions, applied to 1945 profits, would have increased this to possibly 13½ per cent.²

6. A favored few corporations in industries with rapidly improving technology or limited competition may be in position to make exceptional profits—as labor demonstrated a year ago was true for the auto industry. But if wages in those industries are increased as much as their favorable position can permit, less favored industries cannot increase their wages in the same proportion without raising their prices. That was the fatal flaw in wage policies of a year ago—and one we must not repeat again if cyclical inflation is to be really checked. Instead, if society is to gain, such exceptional profits should be mostly distributed as lower prices.

7. Real wages, properly distributed among workers, cannot be permitted to lag behind real increase in productivity—for if they do, profits will increase unduly, incomes will become more unequal, expenditures and consumption will lag behind production, and chronic depression will ensue. Neither can real wages be pushed up much faster than real increase in output makes possible, for if we attempt that (as we did in 1946), inflation counteracts our efforts.

These are the physical principles on which wage and price determination should be based; but they find little place in the bargaining process of today.³

In our society, prices, profits, and wages are influenced not only by indifference and cost curves, but by the institutional power of bargaining groups—especially corporate enterprises and labor unions. In the twenties, corporations had achieved superior power, prices were increasingly set by administrative decisions of businesses, profits soared, and real wages did not keep pace with labor productivity.⁴ The great depression of 1929 followed.

Subsequent efforts to strengthen the bargaining power of labor have now created almost equally monolithic strength in some bargaining groups on labor's side. I will skip the period of wartime control which Dr. Galbraith has so clearly characterized. Today, with the increasingly interdependent character of our technological civilization, with the ability of any one small missing component part to block a whole long and complex production process, and with the massed forces both of labor and of business, collective bargaining has almost ceased to be a process of orderly negotiation and has more and more become a stalemate in which pay rolls, profits, and the product of society as a whole all suffer. In the past twelve months, hardly has one major strike been settled before another, equally disabling, has been under way.

Even so, the effect of strikes on production can be overemphasized. In-

² Data from estimates in National City Bank of New York economic letter, December, 1946, p. 140.

³ The possible alternative distributions of increasing output per worker were explored further, in a different context, in my book, *\$2500 per Year* (Harcourt, Brace and Co., Inc., 1936), pp. 199-205.

⁴ Between 1923 and 1929, for a wide group of factory products, factory pay rolls *per unit of output* fell 16%, while selling prices of the same products remained virtually unchanged. See *1946 Agricultural Outlook Charts* (Bureau of Agricultural Economics, U. S. Dept. of Agriculture), p. 6.

dustrial output, which had dropped from 220 in mid-1945 to 160 for the first quarter of 1946, was back to 182 by November, 1946—a reconversion achievement which compares well with the rate of recovery from past depressions. But the recovery carried with it price advances which now threaten, temporarily at least, to block further recovery.

It seems today as if both business and labor have been given powers too big for them to handle if the general interest of society is to be served.

Some may believe that all these powers should be destroyed, and atomistic competition restored—if it ever existed. But I agree with Dr. Dunlop that only along two other lines can a solution be found. One is that leaders of both business and labor will learn to exercise a new statesmanship in the use of their power, recognize that real income and not money income is what counts, and find ways to negotiate wages and set prices without sabotaging the maintenance and increase of production—and establish prices and wages in such ways that all workers share in the increasing real income per capita, not merely a fortunate minority in favored industries and occupations. As Dr. Dunlop has indicated, widening the area of bargaining should help produce more statesmanlike results.

The other line of solution is that society should take back, through government, some of the excess powers it has ceded to private groups. Corporate power depends in part upon public grants of rights and privileges. So does labor union power. If these powers cannot be exercised effectively in the public interest by those who now hold them, new public agencies must be created to control the process of establishing prices, wages, profits. A wide variety of public devices might be possible, ranging on the labor side from minimum wages, fact finding, or voluntary arbitration, on to compulsory arbitration, or even more drastic price and wage regulation to insure not only that wage increases approved are in the general interest, but also that particular prices are reduced when necessary in the general interest. Time does not permit me to explore what these new devices might best be, nor what new economic and statistical yardsticks—in physical terms as well as dollar signs—would be needed to guide their decisions. The Council of Economic Advisers, in its first notable report, has already explored part of the way. But one thing is clear: The people of this country cannot safely permit any private group to misuse its power, publicly bestowed, to strangle the welfare of all. And that applies to prices as set by giant business just as much as to wages as influenced by giant labor.

BANKING PROBLEMS

THE COMMERCIAL BANKS AND THE PUBLIC DEBT

By CHARLES C. ABBOTT
Harvard University

I

It is becoming more and more evident that economic pressures of major importance during the next few years stem primarily from the second World War rather than from the great depression. In the financial field the greatly increased federal debt occupies the center of the stage. Methods and procedures employed in managing this 265 billion dollar obligation will be of far-reaching significance. In this undertaking the commercial banking structure occupies a key position.

The salient statistical features of the debt are well known. Those of special significance to the banking system may be summarized as follows: As of June 30, 1946, commercial banks held 84.5 billion dollars, or 31.3 per cent of the total direct and guaranteed debt; 23.4 billions, or 37.8 per cent of the marketable debt due in twelve months or less; and 45.3 billions, or 68.7 per cent of the bank eligible Treasury bonds. As of the same date, 55.2 per cent of the assets of national banks were represented by government securities, and for every dollar of adjusted demand deposits insured commercial banks held about 92 cents of federal obligations. For the year ended December 31, 1945, between 47 per cent and 48 per cent of the gross earnings of member banks came from interest on government securities; but net profits, after recoveries, losses, charge-offs, and income taxes were only 79 per cent of such interest payments.

During the immediate future, debt management will attract much of the attention bestowed upon deficit spending during the thirties and upon central banking techniques in the decade after the first World War. Until recently the problems implicit in this subject have not been studied intensively either by monetary theorists or by practical financiers. Neither the present state of our knowledge nor the theoretical framework within which much of our financial thinking takes place leads me to believe that problems inherent in our present situation will be resolved without much hard thinking and hard work.

II

In the management of the federal debt it seems clear that policies aimed at influencing the volume of Treasury securities held by commercial banks must be related to the whole problem of debt management,

and correlated with procedures directed at other classes of debt holders. Debt owned by the banks cannot be treated as an independent phenomenon.

Our experience during and since the war has taught us that the pattern of debt ownership is a unit. Except during periods of debt retirement, reductions in the volume of Treasury securities owned by one class of holders necessarily occasion increases in the portfolios of other classes. Sales of Treasury securities by commercial banks are reflected in acquisitions by other types of holders—Reserve banks, savings institutions, insurance companies, government trust funds, corporations, or individuals. Conversely, sales by any one of these classes, unless absorbed by other nonbank owners, swell the portfolios of commercial banks. Under some circumstances such transfers are of greater consequence than are moderate expansions or contractions in the total debt.

In its latest report the Board of Governors has expressed concern over the possibility that commercial banks may transfer short-term securities to the Reserve banks and, with the proceeds, acquire bank eligible securities from nonbank holders. To some observers it has seemed certain that with the passage of time much the larger portion of the 21 billion dollars of Treasury obligations held by nonfinancial business corporations at the end of 1944 would be shifted to other classes of owners—and indeed this process has already begun. Still other commentators have believed that the large amount of demand debt outstanding in the hands of the public represented a continuing threat, in that new holders for a substantial portion of it might some day need to be found on short notice. Whether it is desirable that our savings institutions continue to invest, as they have for some years past, the entire amount of new savings received each year in dead-weight government debt, rather than in productive business enterprise, is also a matter that merits attention. Since changes in the government portfolios of one class of holder induce changes in the portfolios of other classes, the investment policies of savings institutions cannot be considered without reference to their effects on the commercial banking structure.

In short, we reach the conclusion that the amount of debt that commercial banks hold or should hold, and the character of such debt—by which I mean its maturity, marketability, rate of return, and other provisions—cannot be determined independently of the amount and character of the debt held outside the banking system. Debt management and the disposition of the debt must be conducted with reference to *all* types of actual or potential holders, not with reference to one type alone.

III

What are the underlying logics of the new financial situation in which we find ourselves? Space limitations prevent their detailed examination. To place the banks and their security portfolios in perspective, however, some of the elements in the situation must be noted.

The course of events during and since the war has given a new and much greater significance to the power of the Treasury to determine maturity dates, interest rates, and other provisions attaching to particular issues of government securities. Because of the great growth in the total debt and the great increase in the volume of bonds held by commercial banks and savings institutions, the Treasury is now in a position to influence substantially if not to control the earnings of commercial banks, the reward paid to "thrift savings," and the cost of life insurance. In large measure, these are new developments in the financial economy.

The decision of the Treasury, an executive department, to use large amounts of debt redeemable on demand might—should there be a sudden increase in cash redemptions—upset the relation of the government's cash income to cash outgo, as determined by the legislative branch through its appropriation and revenue statutes. We have not hitherto had a situation in which the maturity pattern of the debt was such that it could, on the one hand, disturb the financial dispositions of the Congress or, on the other hand, materially affect the income stream and consumer spending.

The ability of the Treasury to vary the volume of bank eligible and ineligible securities and the relative amounts of short- and long-dated debt also grants it the power, within wide limits, to regulate if not to control the money supply of the country. The elasticity of the currency and the availability of credit now largely depend upon Treasury decisions rather than upon Federal Reserve policy. The Board of Governors has virtually acknowledged its inability under present conditions to regulate credit or to mitigate untoward effects resulting from sudden transfers of bonds from one class of owners to another (i.e., from non-bank holders to commercial banks, or from commercial banks to Reserve banks): "at present the country's central banking mechanism lacks appropriate means . . . to restrain unnecessary creation of bank credit through continued acquisition of government or other securities by the commercial banks."¹ Parenthetically I might observe that many of the Board's lost powers could be regained if it were willing to unpeg the $\frac{7}{8}$ per cent rate on certificates. So far this move has apparently not seemed practicable to the Board.

¹ *Annual Report of the Board of Governors of the Federal Reserve System*, 1945, p. 3.

So long as 40-50 per cent of the federal debt is floating debt, i.e., debt due on demand or within one year, the "refunding problem" by the very nature of the case must be the major concern of fiscal authority. If evidence were needed, we have the often demonstrated official interest in the continued stability of the government bond market.

Use of excess funds borrowed in the eighth war loan temporarily relieved the pressure of this problem, but the period of relief is now over. Once more the matter is to the fore, even though use of moneys received from the sale of savings bonds and of moneys made available to the Treasury by the government trust funds reduces the need of refunding through the issue of marketable securities.

Under present conditions the thinking of many persons is naturally strongly influenced in favor of maintenance of the status quo and a continuance not only of a supported government bond market but of the particular interest curve employed during the war. When faced with refundings of the magnitudes implied by the present maturity pattern of the debt it is difficult to appraise objectively the long-time desirability of a controlled interest rate and a supported capital market; to determine whether the spread between $\frac{3}{8}$ per cent for bills and $2\frac{1}{2}$ per cent for long-term bonds is, on its own merits, suited to peacetime conditions; or to assess the long-term effects upon our financial institutions of wartime policies when these are continued after the termination of hostilities.

The increased size of the debt, and the importance that now attaches to the pattern of ownership, place the open-market operations of the Reserve banks in a position different than that which they occupied ten or twenty years ago. Whether such operations were ever *exclusively* directed at influencing the reserve position of member banks may be doubted. In any case, henceforth manipulation of excess reserves will be of relatively less weight than formerly in Federal Reserve policy. For in our new financial environment, portfolio adjustments of nonbank holders of government bonds are of more consequence than they used to be, and consequently the adjustments of commercial banks are of relatively less significance. The character of the new situation will compel open-market policy to give increased attention to the behavior of government bond holdings that are outside the commercial banking system.

Clearly the interest burden must be kept to the minimum compatible with economic stability. An increase above its present level of 5 billion dollars would be a misfortune. Yet this decision ought not to shut our eyes to other aspects of the subject, or to preclude its further study. Many considerations, in addition to the sheer dollar amount of interest payments, combine to determine the level of debt service that is feasible.

The desirability of a small interest cost should not lead us to conclude that a low rate must under all circumstances be *the* primary goal of policy, no matter how high the price paid for its attainment in other areas, and irrespective of the strength of inflationary pressures. Nor should we irrevocably fix it in our minds that the use of a large or of an increasing amount of floating debt is the only method of keeping interest charges at a low level.

Increasingly, as the period since V-J Day lengthens, the question stands out:—Shall we continue our wartime financing policies, notably the maintenance of a large demand and short-term debt and a pegged interest curve? Or shall we aggressively undertake procedures designed to provide a more permanent disposition of the debt, especially the floating debt?

Continuation of wartime policies implies continued pressure from the refunding problem, continued meticulous support of the government bond market, continued fear that large shifts in the ownership of the debt may take place and be disconcerting, continued preoccupation with the interest-cost—perhaps to the neglect of other areas of fiscal management. Probably this policy also implies, as the Board of Governors has intimated, the grant of additional powers to the fiscal authorities.

On the other hand, a departure from present policy would inevitably involve courage, imagination, and many difficult decisions. Probably it would require that the government operate for some years with a surplus, and that the surplus be used to retire debt—although the redemptions should not be permitted to precipitate unduly stringent deflationary forces. Possibly a new policy would lead to the development of new debt forms. Conceivably it might mean moderate advances in interest rates on some portions of the debt, although such increases, one may hope, would be offset by decreases on other portions.

IV

In the longer run we will have to face other questions. For example: What do we want the debt to do for the economy? In answering this question we must take account of the useful functions the debt can perform as a repository for the savings of individuals, as an outlet for a portion of the investible funds of savings institutions, as a basis for the currency and for Federal Reserve credit, and as a source of liquidity for commercial banks—though perhaps we should guard against “too much liquidity.” In the large, we want the debt, which was contracted in order to win the war, to provide a sound financial basis for the peace, without which there would not have been even the possibility of prosperity.

Another question is: What do we want to keep the debt *from* doing to the economy? In general, I suppose, we wish to prevent the debt from acting as an element of instability. More specifically, I presume we want to ensure that policies of debt management do not interfere with the legitimate functions of the Federal Reserve System or make credit conditions uncontrollable; that the requirements of debt management do not preclude a well-rounded and effective fiscal policy; and that the debt itself does not act as too great a drag upon the productive process and expansionist tendencies in the economy. In dealing with these matters we shall have to consider ways and means of reducing the effects on the money supply that, in recent years, have been produced by variations in the total debt and by changes in the proportions of long- and short-dated securities.

What ought to be the general relationship between the existing volume of debt and existing accumulated savings, and what amounts of the new savings accruing annually should be invested in Treasury obligations rather than in the financing of productive business? Among the elements entering into the resolution of this question will be the amounts of government securities that it will be desirable or practicable for our savings institutions to hold.

These three questions might be rephrased. Over the next ten to twenty years within what ranges should fluctuations take place in the bond accounts of the several classes of debt-holders—commercial banks, savings banks, Reserve banks, life insurance companies, government trust funds, business concerns, and individuals? In short, what amounts of securities will or should particular classes of owners hold and—even more important—for what reasons? Because of the rate of return, because of the liquidity of government bonds, because of a statutory requirement, because of some provision of a particular issue—such as a fixed redemption price or a tax exemption privilege—or because other satisfactory outlets for funds cannot be found?

Finally, shall the decisions on these matters remain at the virtual discretion of the executive branch of the government, through its power to determine rates, maturities, and other terms attaching to individual security issues, or shall the legislative branch offer broad guidance and place general limitations on the extent of executive discretion?

V

To answer these questions we must choose our goals and determine our purposes. Having selected our objectives we should, in a free society, pursue them by employing *inducements* rather than by applying *compulsions*.

Clearly we must maintain the government's credit and preserve the

"public treasure"—not only for the sake of our financial well-being, but also as a matter of national security. The manifest symbol of this achievement is a low interest rate on federal obligations. In the pursuit of this objective, however, we must in the future make use of means other than a continuous expansion of bank credit. A redistribution of a part of the bank-held debt into nonbank hands would be helpful in this connection. A soundly conceived tax structure will be essential. Of equal importance will be some regular plan, abandoned only in cases of emergency—such as war or the onset of depression—for retiring debt out of surplus revenue.

The inherent instability in the debt's present maturity pattern and in the existing pattern of ownership offers serious impediments to the exercise of credit controls and the development of an effective fiscal policy. Even excluding problems of debt management the obstacles in the way of an efficient fiscal policy are substantial, as I have indicated elsewhere.² If we wish, so far as practicable, to insulate fluctuations in the money supply from the effects of the Treasury's debt policies, and to give authorities responsible for maintaining a high level of economic activity the freedom of action they need, we should seek to transfer a portion of the bonds presently held in the banking structure to nonbank holders. By this, among other means, we should endeavor to prevent problems that are essentially matters of debt management from embarrassing the central banking authorities. The amount of debt that should be transferred and the speed with which the transfer should take place, deserve most careful study.

If interest rates are to be flexible and perform the functions essential in a free economy we shall need to relax price control as regards at least a portion of the debt. Cogent reasons exist, as Secretary Morgenthau often pointed out, for protecting the small saver against the risk of interest fluctuations. Most of these arguments, however, are not applicable to informed buyers and financial institutions. As the period of war financing recedes, the reasons for according the same protection to all types of Treasury security holders are less and less cogent, and the disadvantages of so doing are correspondingly larger.

VI

But it is reasonable to inquire, what if current policies and procedures do not satisfy the needs of the situation? Where shall we look for new owners of Treasury securities if increasing sales of savings bonds, the growth of government trust funds, and occasional offerings of long-term securities to savings institutions do not redistribute a sufficient

² See the author's *Management of the Federal Debt* (McGraw-Hill Book Co., Inc., 1946), Ch. VIII.

part of the bank-held obligations? What steps should be contemplated if the large floating debt makes it impolitic to unpeg, however gradually, the interest curve? Or, if the bill rate is "defrosted," to use Mr. Sproul's phrase, what should be done if permissible fluctuations in short rates prove inadequate either to halt inflationary pressures or check deflationary threats—even when combined with open-market operations of the enlarged scope suggested earlier? In short, how shall problems in the field of debt management be prevented from hindering policies designed to promote economic stability, and how shall the ability of central banking authorities to control credit conditions be reconstituted?

Answers to these questions are not easy. The complexity of the subject forbids a simple solution. Furthermore, debt policies developed during the war circumscribe what it is now practicable to do. Some observations, however, as regards possible courses of action, may serve a useful purpose.

It is not inevitable that the Treasury retain forever the enlarged monetary powers it acquired during the war. These were obtained, not by direct Congressional enactment, but, as it were, fortuitously, through the growth of the debt and the course of events. If it should seem desirable to reduce these powers, various methods are available.

One of the readiest would be to amend the Public Debt Act so as to place some general limit on the Treasury's power to determine, at its own discretion, the maturity pattern of the federal debt. Such an amendment might take the form of two requirements: first, that after a future date, such as June 30, 1950, not more than a stipulated percentage of the total debt should be due or payable within twelve months; second, that after this same date, the securities due within twelve months plus the demand obligations should not exceed a somewhat larger percentage of the total debt. The effect of the amendment, if the percentages named were such as to accomplish the purpose, would be to compel within a stated period a refunding of some short-term into intermediate- or long-term obligations. A proposal of this sort would clearly be opposed from many directions on various grounds. Almost certainly one of the major complaints would be that such a restriction would improperly limit executive flexibility and discretion. Yet the fact remains that many of the Treasury's powers that would be reduced by such legislation are not ones that the Treasury has obtained through specific Congressional mandate.

Suggestions have been made in various quarters that the Treasury, now that the excess funds borrowed in the eighth war loan are exhausted, resume the issue of five to ten year securities on a 1 per cent to 1½ per cent basis. Such a move would be in accord with the objective

of lengthening the average maturity of the debt. Furthermore, resumption of this type of obligation would not necessarily raise the interest cost. As of the end of 1947 all 2 per cent Treasury bonds will be within a five-year call date. The interest saving effected by refunding some of these issues into 1 per cent or $1\frac{1}{2}$ per cent obligations would offset the rising interest cost of refunding bills and certificates into longer-term, higher-rate paper.

If need for redistribution of the debt becomes pressing and the search for new sources of buying power to absorb government bonds becomes acute, many proposals will be put forward. In appraising each such suggestion the test should be: Will it sell a substantial amount of securities, in addition to the amounts presently being sold, without simultaneously creating disadvantages that counterbalance its usefulness?

Relaxation of present restrictions upon the purchase of E, F, and G bonds would be directed at tapping new sources of buying power, although it is doubtful whether such relaxation would greatly stimulate the sale of these bonds. Conceivably the sale of a longer-term "G" might bring in some additional money. In considering these suggestions we should note that insofar as the sale of these obligations was stimulated, the amount of demand debt would be increased.

At this point we should, in all honesty, admit that the greatest body of funds in the economy not presently utilized to purchase and retain Treasury securities is the sizable block of resources that would be attracted by tax-exempt federal obligations. The Treasury is not now offering any real competition to the municipal bond. At this point, also, we should make it clear that the disadvantages attendant upon the renewed issue of tax-exempt securities would greatly exceed the advantages. This decision, however, need not preclude considering whether tax exemption might not be employed in some relatively innocuous way.

If the Internal Revenue Act were so amended as to exempt to the individual taxpayer some modest amount of interest on federal securities, say \$200 per annum, two useful purposes might be served. In the first place, over a period of time virtually every person who owned any appreciable amount of securities would, almost certainly, come to have a nest egg of government obligations. In the second place, and this is more important, the motives for the *continued holding* of these nest eggs, irrespective of the attractions of other investments offering a higher return, would be substantially strengthened.

A second possibility is an amendment to the Internal Revenue Act that would exempt a modest portion of an individual's current income from taxation, provided this portion were invested in a long-term, low-interest government security of restricted negotiability, specially designed for this purpose. The interest on such a security could be at a

nominal rate, perhaps $\frac{1}{4}$ per cent, and should be taxable. The redemption values of the obligation would need to be so scaled as to induce its retention till maturity. Probably its provisions should permit, in the event of the owner's death prior to maturity, acceptance of the security at face value in the payment of estate taxes. As a practical matter, the Secretary of the Treasury would probably need to be given the power to vary from year to year, and to announce in advance, the percentage of an individual's income that could be invested in these securities during the coming twelve months.

If some proposal such as this were undertaken it would be necessary, in order to do justice as among taxpayers, so to adjust the terms of the offering as to give the same treatment to all purchasers, irrespective of their tax brackets. In the absence of such adjustment the higher the taxpayer's bracket the greater would be the advantage accruing to him through the purchase of securities with the exempted portion of his income.

As I have said, the usefulness of these, or of other suggestions, depends not only on their administrative feasibility but also on the amount of new buying power that the inducements offered would bring into the government bond market.

On first glance the funds required as legal reserves for member banks appear to be a source of buying power that might, in part, be used for the absorption of government debt. Suggestions of this character, which contemplate using these funds as a pocket into which government securities might be tucked on a semipermanent basis, are full of pitfalls. What their ultimate consequences might be is difficult to foresee.

Before exploring this possibility a number of points must be made clear. In the first place, such suggestions contemplate amending the Federal Reserve Act so as to permit assets other than cash on deposit with the Reserve banks to count as legal reserves. In the second place, it would not be practicable or desirable to permit all required reserves to be invested in government obligations. Only a portion of legal reserves is involved in the question, and the exact proportion is a matter of great consequence. In the third place, it would be of the utmost importance to make the arrangement permissive rather than compulsory. Member banks might be allowed, but should not be compelled, to hold up to a stipulated percentage of their required reserves in the form of government paper. In the fourth place, were steps of this nature undertaken, a new type of obligation should presumably be designed for the purpose. Such a security could be very long term; perhaps it would be practicable to make the paper negotiable as among commercial banks, though not among others, and salable at face value to Reserve banks. Since use of such obligations would permit banks to convert nonearning

into earning assets, the interest rate could be extremely low; probably $\frac{1}{4}$ per cent per annum is the maximum that should be considered.

The attraction of a suggestion of this type is that it would presumably "place" a portion of the debt on a semipermanent basis at a very low interest cost. But there are offsetting disadvantages, of which two may be noted. The operation would concentrate the debt even more heavily than is now the case in the hands of commercial banks. If, as presumably would be the case, the Treasury used to retire outstanding obligations funds received from commercial banks purchasing these new securities, such concentration would occur, irrespective of whether the retired obligations were owned by the commercial banks or by others. In the second place, refunding of nonbank-held obligations into this new type of security, or of obligations held by the commercial banks, would increase inflationary pressures. Such pressures might be checked if an operation of this sort were combined with a further amendment to the Reserve Act permitting reserve requirements to be advanced above present levels. But the desirability of this further step is not clear and, in any event, limitations of space prevent its exploration in this paper.

One further observation upon courses of action should be made. The possibilities mentioned here, and similar ones, can in large measure be described as *devices*. As such, they might be useful adjuncts to policy, but of themselves they do not constitute policy. While they might assist us in achieving our goals, they cannot take the place of a tax structure that, with the minimum burden, will raise sufficient revenue to satisfy the government's legitimate needs; they are of little help without an adequate system of financial administration; they are a part, but a part only, of a program designed to distribute the ownership of the debt so as to promote economic stability; and they are not a substitute for the intent—our economic fortune permitting—to reduce the debt to a level where we can face either another depression or another emergency with financial equanimity.

VII

Let me conclude by summarizing some of the points that I have made.

The wartime increase of the federal debt, together with the maturity pattern selected by the Treasury and the pattern of ownership that has grown up, has created a financial situation that is unprecedented in this country. One of its results is the greatly enhanced power over monetary matters that the Treasury has acquired. Another result is the enlarged significance of debt management. Although the bank-held debt is a key element in the new situation, it is not one that can be dealt with independently. The entire pattern of ownership and the whole

maturity pattern must be brought under scrutiny when the position of the banking structure is studied. Interest-policy, as developed by the Treasury and the Board of Governors, as well as open-market operations, must now be related to all classes of holders of government securities, not simply to commercial banks.

While we are, in the short run, faced with many matters of policy and procedure, the most pressing seems to be the manner and the speed with which wartime practices should or can be altered to suit the needs of peace. In the longer run we shall have to face other problems. Chief among them are questions relating to the ownership of the debt. Over the next ten or twenty years we will have to decide what amounts of government securities we wish the several classes of owners to hold, and for what reasons. We will need to determine within what ranges these holdings should fluctuate if, on the one hand, the economy is to be reasonably stable and, on the other hand, it is to have the flexibility necessary for growth and expansion.

Satisfactory answers to these and allied questions will be difficult to find. Existing procedures and some possible alternative courses of action have been discussed in this paper. In our appraisal of these matters one final point should, perhaps, be made. The complexities of debt management are now enormous. The dollar magnitudes involved are huge. The gravity of the issues is great. Consequently, evolution of new policies and methods can proceed only cautiously and gradually. We may assume that our present arrangements, whatever their merits in wartime, are less and less suited to the emerging conditions of peace as the period since V-J Day lengthens. Consequently the need for new procedures steadily grows. But on the other hand, in view of the complexity and gravity of the issues, it seems unrealistic to anticipate sudden or startling changes, or to believe that such matters as new legislation or the development of new debt forms can do much more than indicate the general direction in which events will move.

PRINCIPLES OF BANKING REFORM

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It is agreed by all competent observers that unusually complex problems will demand the attention of our banking authorities in the not-too-distant future. The question therefore arises whether even the most skillful administration can cope with such problems successfully under the limitations set by our antiquated and unreformed banking system. The purpose of this paper is to indicate the nature of existing defects in the banking structure and to offer a few suggestions for improvement.

What the Board of Governors of the Federal Reserve System thought of our banking structure even before the recent war is comprehensively stated in the Board's annual report for the year 1938. This report bristles with such derogatory expressions as the "piecemeal" character of the development of the "mechanism of supervision"; the "crazy quilt of conflicting powers and jurisdictions"; "overlapping authorities"; "gaps in authority"; "diffusions of supervisory responsibility." But condemnations of this sort have not been any monopoly of the federal agencies. Thus, in the *Report of the New York Banking Board* for 1936,¹ concern is expressed over the possibility that the federal authorities might define trade areas differently for purposes of extrajurisdictional branch banking than they were so defined in the Stephens Act of that state. After pointing out the strenuous effort that had been made to secure the "greatest possible degree of co-operation with federal supervisory authorities," the New York Board continued as follows: "It has been disturbed by certain instances which have come to its attention indicating a lack of co-ordination among the various federal supervisory agencies and between such agencies and the supervisors of . . . states."

There is plenty of evidence to the effect that it was not easy for the rival authorities to realize even such progress as has been achieved in devising harmonious courses of action. But, it is more worrisome still that the regulatory authorities themselves have been unwilling to predict that this co-operation can be guaranteed to endure. Thus, in its *Annual Report* for 1938,² the Board of Governors argued that the interpretation of the recently achieved voluntary agreement regarding uniform policies of bank examination between the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Board

¹ See *Annual Report of the Superintendent of Banks of the State of New York for 1936*, p. 21.

² P. 4.

of Governors, "may vary from time to time in accordance with the points of view of those responsible for the policies of the three agencies."³ Nor was it so long ago that the Federal Deposit Insurance Corporation entered the lists against the Board of Governors of the Reserve System as the champion of the exchange-charging, and, therefore, non-member banks, on the issue of whether the absorption of an exchange charge by a balance-holding city correspondent constitutes an indirect payment of interest on a demand deposit.³

All this is part of the official record and must be shocking indeed to those who believed with Superintendent Broderick of New York in 1934 that⁴ "such disparity as still exists in banking practices due to differences in laws will tend to disappear as the national program is carried out and all banks having deposit insurance become members of the Federal Reserve System."

For a variety of reasons economists ought to be more concerned than they have been with the problems of bank organization and control. At the present time the fashion is to interpret changes in the national income in terms of the ratio that has prevailed between savings and investment. Certainly, in realistic studies of this problem, adequate attention should be given to any failure to tailor the powers of our thrift-gathering institutions to investment outlets in particular localities. Not nearly enough thought has been given to the proper integration of our auxiliary credit institutions; i.e., those which for the most part merely distribute deposit currency which the commercial banks initially bring into being.

It would not be expected that the Board of Governors would go deeply into the question of the relationships of commercial banks to other types of financial institutions. This would be to pass beyond the field of the Board's principal responsibility. But one broad issue the Board did inject into the discussion: the question whether examination procedure applicable to individual banks meshes properly with the general credit operations of the Federal Reserve banks. Examiners deal with local situations on the basis of precedents established over the long period of time and the Board argued that the combined influence of examiners' opinions during critical periods may not be at all in conformity with national credit policies. This is a matter we heard a lot about in 1933 and may hear much more of again; and it may perhaps be

³ The position of the Board of Governors on this matter was made known to Senator Wagner on January 24, 1944. See *Federal Reserve Bulletin*, February, 1944, pp. 126-131.

⁴ See *Annual Report of the Superintendent of Banks for the State of New York for the Year 1934*, p. 8. The act of Congress of June 20, 1939, repealed the provision of the Federal Reserve Act which would have required state banks with average deposits of \$1,000,000 or more to be members of the Federal Reserve System in order to have their deposits insured.

regarded as the basic complaint of the Board; and the conclusions of this paper are predicated on the assumption that this complaint is legitimate.

The Board of Governors did not by any means, however, exhaust the subject of the inadequate adaptability of our existing banking structure to the requirements of general credit policy and there are many respects in which economists would want to supplement it. Take, for instance, the problem of the effects of the Treasury's drawing in funds from particular parties at given times by, say, taxes and thereby diminishing the reserve balances of certain member banks; and then, later, to disburse these funds to those who may keep their deposits more largely in nonmember banks. There is a wide dissimilarity between the reserve requirements of some states applicable to deposits of nonmember banks and those which Federal Reserve member banks must meet. Not only do percentage requirements vary but some states include securities and cash in vault in legal reserve funds and it is customary to permit varying amounts of deposits with city correspondents to be counted as reserves. When this latter procedure is permitted the pyramiding of reserve credit into the vast overstructure of deposits held by the public may proceed to a much greater degree than if all banks were members of the Federal Reserve System. In the case of Iowa, for instance, a deposit credit at a member bank may comprise 85 per cent of the required reserve against demand deposits of a commercial nonmember bank. Shifting of deposits back and forth among the 6,400 nonmember insured commercial banks and the 6,900 member banks, affecting as it does the reserves required of particular classes of banks, may thus exert profound effects upon credit conditions. Such differences in reserve requirements complicate the task of the reserve administration, not only in estimating the needs of the country for more or less reserve credit, but also of avoiding, through their operations, effects that are not desired. I wonder if one of the reasons why it is now so fashionable to disparage the importance of monetary factors in business cycle theory is not the general clumsiness of the system with which our general credit authorities have to deal. Uniformity of reserve requirements against similar types of deposits would seem to be desirable.

Why has it proved impossible to effect any substantial modernization of our banking structure? In answer to this question anyone can recite a plenitude of doleful facts. But the basic answer is that there always appears to be a good reason, when a new credit agency is created, for giving it some of the powers of an existing agency without relieving the older agency of responsibility for the exercise of these same powers. Then, again, it seems not to be politic for any authority to make suggestions for reform which would trespass upon the preroga-

tives of other authorities. The Board of Governors' indictment of 1939⁵ is thus to be regarded merely as a bill of complaint. It is part of the Board's apology for its inability to employ credit powers more effectively to help stabilize the economy. One cannot even be certain that the Board would welcome that concentration of authority which would make its responsibility clearer. On the part of the bankers, themselves, no one would seriously contend, I suppose, that the American Bankers Association is so constituted that it can act daringly in the direction of advocating a redefinition of the powers of some types of banks in favor of other types, or of proposing limitations on the powers of any of the supervisory agencies with which the bankers deal.

If any thoroughgoing reform plan is to receive serious attention from the lawmakers, initiative will have to be taken by economists or by some other nonbanking group.

This is my apology for offering a few blunt suggestions of my own, primarily for the purpose of stimulating discussion, and without confidence that all opinions can be sustained before the experts. But we have had enough of compromise and concession in the discussion of principles and the burden of doubt would seem to be against the zealous resisters of unplanned development. I am firmly convinced, moreover, that failure to systematize the banking structure will encourage a far more complete regulation by the state of the affairs of all business than we have yet experienced. Monetary planning operates primarily through general forces and, if successful, lessens the necessity for the application of specific controls to particular enterprises.⁶

Proposals which follow ignore the question of relationships of the commercial banking system to the Treasury. As demonstrated by the preceding speaker this problem alone would require the time allotted for an entire paper.

My initial proposal is not novel in any sense. It has been made many times. It is merely that all demand deposit banks be required to belong to the Federal Reserve System, and that also the law should be clear that other types of banking institutions shall not be members of the Reserve System.⁷ It is the demand deposit banks that manufacture the country's principal exchange media, a part of which other institutions distribute in their loan and investment operations. While it is not true that time deposits are never originated through loans and investments,

⁵ Covering operations for the year 1938.

⁶ Cf. Harold L. Reed, "Federal Reserve Policy and Economic Planning," *American Economic Review*, March Sup., 1933, pp. 108-118.

⁷ The nearest the Federal Reserve Act comes to confining membership in the Reserve System to commercial banks is the provision of section 9 that, in acting upon applications for membership, the Board of Governors shall consider whether or not the corporate powers are consistent with the purposes of the act.

it is generally agreed that it is to the demand deposit banks that we must look if we wish to explain the main fluctuations in the outstanding volume of bank credit. Since this is so it would seem to follow that the reserve authorities cannot adequately discharge their responsibilities if they do not have supreme supervisory, as well as operational, connections with the demand deposit banks.

Two means of bringing all the demand deposit banks into the Reserve System have been suggested. In the first place, Federal Reserve membership might be made a mandate of Congress under the general authority of the legislative branch to regulate the country's currency. Secondly, law might provide, in the manner of the original conception, that the only commercial banks whose deposits may be insured by the FDIC must be members of the Federal Reserve System.

The requirement that all insured banks must be members of the Reserve System might not be adequate to accomplish the purpose in hand. I, therefore, favor the employment of both of the above measures. It certainly is a matter of concern that at the present time there are almost as many insured nonmember banks classified by the Board of Governors as "commercial" as there are member banks.

The problem of distinguishing between commercial and noncommercial banks presents certain technical difficulties and it will be argued later that it would be impracticable to deny demand deposit banks the right to deal in time deposits. It will be necessary, therefore, to set up some arbitrary test in distinguishing between commercial and noncommercial banks, such as the fixing of the percentage of the bank's total deposits—say, at 30 per cent—that must be of the demand character. Further reliance upon the discretion of authority might be necessary in cases like some trust companies whose nondeposit operations reach large proportions.

If we assume, however, that the technical difficulties of distinguishing between commercial and noncommercial banks can be surmounted with sufficient precision for legislative purposes the next problem would be that of the proper method of examination and supervision of the commercial banking system. Guiding principles, in my opinion, should be the following: (1) the overlapping authorities and powers of federal agencies should be minimized by statutory law; and (2) any such legislation should concentrate supervisory authority in the system that is charged with the principal responsibility for the determination of general credit policy; and (3) every feasible administrative device should be employed to co-ordinate the supervisory activities of state and federal agencies.

In discussions of the problem of reducing the area of overlapping supervisory powers possessed by federal agencies, opinions have dif-

ferred as to whether it would be wise to increase the authority of the Federal Reserve System, that of the Comptroller of the Currency, or of the Federal Deposit Insurance Corporation. To me it does not seem logical to provide that unification should proceed by giving the insurance authority the general credit responsibilities of our central banking system. Equally indefensible would it seem to be to try to develop the federal chartering system, the national banking system, into an agency for the determination of general credit policies. There would thus seem to be no alternative, if we sincerely want unification and modernization, to concentrating supervisory power over demand deposit banks in the Federal Reserve System. In undertaking such a course, however, we should not lose the benefits of the national banking system's most important asset, its developed examination facilities. It is thus here urged that:

1. There be legislation to have the office of the Comptroller of the Currency absorbed into the Federal Reserve System and that the federal reserve examination system be reorganized in a way appropriate to this fact.

2. Congress provide that, as soon as any state government undertakes to promise reasonably similar state charters to national banks operating in its territory, the federal government shall cease therein to hold the charters of banks of demand deposits. Eventually, it would be hoped, the national banking system could be liquidated.

3. Law should also provide that the certification of demand deposit banks for insurance status in the FDIC is a responsibility of the Board of Governors of the Federal Reserve System and that the FDIC should be relieved of all supervisory authority over the country's commercial banks. Under this arrangement any losses to the FDIC resulting from the certification of commercial banks that fail would be regarded, of course, as a responsibility of the Federal Reserve System. If the technical objections to this arrangement are deemed valid it at least could be provided that an insurance department be set up in the reserve system. But this is advocated only as a last resort.

The general objective is thus to provide for compulsory membership in a reserve system composed solely of state-chartered commercial bank members.

The proposal to have the Federal Reserve System absorb the office of the Comptroller of the Currency is an old suggestion and is made for several reasons. In the course of its honorable career the office of comptroller has developed prestige; and precedent, as well as statutory provisions, supports its standing before courts of law. It has assembled, moreover, a superb staff of bank examiners. The most spirited attack on the proposal to merge this office into the reserve banking system was

made by Comptroller Dawes in 1923.⁸ At that time, however, there was little duplication of supervisory authority, at least in comparison with recent standards of confusion, and the Federal Reserve System was young and relatively untested. Experience, moreover, had not then indicated so clearly the intimate connection between supervision and credit management.

The abandonment of federal chartering implies that such uniformity in commercial banking procedures as is henceforth to be regarded as essential would have to be obtained under the authority of a revised section of the statute having to do with membership requirements in the Federal Reserve System. Presumably, under the general power of Congress to regulate the nation's currency, membership requirements could be made as specific and detailed as necessary for the purpose of keeping sound those institutions which provide the country with its principal medium of exchange. In matters, however, that are primarily procedural in character, or which embody merely local ideas of equity and do not affect the solvency or adaptability of commercial bank operations to national credit policies, such, for instance, as methods of exacting interest on loans, it would not seem to be a primary concern to the reserve authorities what state law provides.

For those who think it is a reckless proposal to advocate the eventual abolition of the national chartering of commercial banks, all of which must be members of the reserve system, I would point out: (1) if the Federal Reserve System had existed in 1863 we probably would never have heard of the national banking system; (2) the national government, simply as a matter of diplomacy, must make some concession to state governments if no state commercial bank is to be allowed to exist without meeting the eligibility requirements of the Federal Reserve System; and (3) even now there are over 1,800 state-chartered members of the Federal Reserve System with deposits amounting to more than a half those of national banks.

The rival suggestion to try to achieve unification in our commercial banking system by requiring the federal chartering of all commercial banks goes too far to be practicable and its frequent reiteration has retarded prospects of modernizing the system.

It is true that what is here advocated would leave commercial banks subject in some degree, at least, to dual supervision. There is no way by which a state government can be prevented from examining banks it itself has chartered. But the danger that sometime in the future the FDIC may develop into a supervisory system rivaling the Federal Reserve System, at least, would be averted. With the abandonment of the national banking system, moreover, we would no longer have to

⁸ See the *Report of the Comptroller of the Currency for 1923*, pp. 17-24.

witness the spectacle wherein more liberal powers are sometimes conveyed to state bank members of the reserve system, in such matters as mortgage loans,⁹ than are granted to national banks in the same territory. The FDIC, moreover, as it will appear later, would still continue as an insurance system for commercial banks, and even as a supervisory agency for certain noncommercial institutions.

There is current in discussions of banking reform another proposal that, so far as demand deposits are concerned, would remove any necessity of continuing the FDIC as a supervisory agency for commercial banks. This is the scheme to require banks to maintain 100 per cent reserves against all their demand deposits. But while this plan embodies a logical philosophy and offers the incidental advantage of making the insurance of demand deposits unnecessary, I think it would be a mistake at the present time to freeze reserve ratios at any particular level, even though that level be 100 per cent. As indicated above, future credit problems will require the most expert administrative treatment and I doubt if the time is ripe to have the Federal Reserve banks give up any of their existing weapons. The power to change reserve ratios may be needed in the future because this weapon possesses certain properties not inherent in discount and open-market operations.¹⁰

How to straighten out the relationships of commercial banks to the federal supervisory agencies constitutes, however, only a small part of the problem of reforming the banking structure. A very important aspect of the problem and one that too often is neglected is that of the proper integration of commercial banks with those other institutions which mobilize thrift and whose advances should be especially adjusted to the necessities of the local community.¹¹ Aspects of this problem that are of special importance are the following: (1) the extent to which the small saver should be serviced by time deposit departments of commercial banks instead of by specialized thrift institutions like the mutual savings banks; (2) whether these specialized thrift institutions should be organized as independent corporations under separate sections of the banking law of the state instead of as departments of a general savings institution; and (3) if departmentalization, instead of separate corporate existence, is to be preferred, the proper means to bring about a change in the existing situation.

⁹ In New York State, for instance, state member banks may loan an amount equal to 66⅔% of the appraised value of the property that is mortgaged. National banks may not loan an amount in excess of 60 per cent of the appraised value of the property.

¹⁰ It may take a long time, for instance, for Federal Reserve open-market operations conducted in the country's money market centers to affect the reserves of interior banks.

¹¹ Savings that otherwise would find an investment outlet may remain as inactive hoards if there is no local use for the funds and if their external employment is prohibited by market frictions, ignorance of outside conditions, and other such factors.

If all localities were large enough to support a fully equipped set of thrift-gathering institutions it might be feasible to consider plans to effect a complete separation between commercial and noncommercial banking. But in the smaller communities particularly, the necessities of realizing economies in overhead expenses, of conveniencing bank customers, and of encouraging a reasonable degree of competition seem to make it necessary to permit commercial banks to continue time deposit departments.

Since it thus seems impracticable to effect a complete separation between commercial and noncommercial banking it is pertinent to ask if the time is not ripe to revive the old proposal to require the segregation of assets, as between demand deposit and time deposit departments of commercial banks. This proposal, of which little has been heard since the creation of the present system of federal deposit insurance, is here put forward, not only for the classical reason that it would lead banks to adjust their earning assets more scientifically to the character of their deposits, but, also, for a special reason that arises out of the position accepted in this paper of how best to minimize the degree of overlapping authority possessed by the different supervisory agencies. Under the plan of segregating assets, arrangements would tend to be facilitated between Federal Reserve and state examination authorities whereby the federal agency could give especial attention to the commercial department and the state authority to the savings department of a commercial bank. In this way, the evils of overlapping supervisory authority in the commercial banking field might be greatly minimized.

But even though commercial banks retain, as they will, their time deposit departments, special state-authorized institutions will continue to flourish in the field of thrift gathering, and I do not regret this is so. The theoretical basis for this deference to specialized savings institutions is the preference for a banking system that, so far as is possible, meets the requirements of borrowers by methods that utilize already existing credit before new credit is originated. When a saver transfers funds from the demand to the time deposit department of a commercial bank, he does not directly increase the lending power of the bank as a whole. What happens from this transfer is merely that the character of the bank's liabilities has been changed. Any resulting increase in the bank's loans or investments will have to be the consequence of the reduction in the bank's reserve requirements. But the amount of reserves that are thus released depends on the arbitrary fixation of reserve requirements for the two classes of deposits; and, furthermore, when a bank makes use of its freed reserves it manufactures new deposit credit.

A transfer of a demand deposit in a commercial bank to a savings deposit in a thrift institution on the other hand, either directly or via transactions in common currency, has different consequences. What then results is in most cases that the savings bank becomes the depositor in some commercial bank. The savings bank is thus put in a position to swap its demand deposit to a borrower. No new bank credit is created by this type of a transaction.¹²

On general a priori grounds it seems preferable that the existing mass of bank credit be employed before new credit is manufactured. Sluggishly used credit does not thereby come into existence which at some later date may burst forth with inflationary consequences. Restricting the volume of credit closely to current needs increases, furthermore, the contact between the central banking system and the member institutions and makes the latter more dependent on the policies of the former. Back in 1928 all this was discussed under the heading of the difficulties of curbing the stock market use of credit which initially resulted from the operations of the Reserve banks themselves. In the future this same problem may manifest itself in different guise. But, no matter what its special manifestations, the essential nature of the problem will be the same.

But there are other reasons for welcoming the existence of specialized thrift institutions. In the first place, their procedures may be especially adapted to the encouragement of particular classes of savers. Herein, I think few will deny the unique advantages to some savers possessed by the installment share of savings and loan associations, as against simple time-deposit passbook accounts, which do not require continued payments at series intervals. Secondly, the type of authorized loans may be especially adapted to the investment needs of the locality or the general territory wherein the bank is situated. Thirdly, these institutions are operated and managed by those whose minds are not absorbed in the quite different problems of commercial banking.

But reasons for dissatisfaction with the existing structure of state-created, thrift-mobilizing institutions are also numerous and varied. For one matter, too many types of institutions provide essentially the same service so that unnecessary overhead expense is imposed upon the borrower and so that it is often impossible to secure as able executive talent as otherwise would be available. Then, again, each of various institu-

¹² This point might be applied to the problem of the fixation of relative reserve requirements for demand and time deposits of commercial banks. Differences might be determined on the basis of trying to get the same effects on the loan volume as from a transfer of a demand deposit to a savings account in a specialized thrift-gathering institution. In this way the effects of thrift could be more easily analyzed and predicted and, moreover, it would no longer have to be admitted that differences in reserve requirements have been determined in a purely arbitrary manner.

tions constantly approaches the state legislature with demands for special privileges as against institutions organized under other sections of the banking law. In this way the problem of legislation and supervision is complicated by institutional jealousies and rivalries. Finally, each type of institution insistently demands protection against other institutions which have invaded its especial domain. An illustration, herein, would be the industrial banks of New York which finally got the right to accept demand deposits and which incidentally may be members of the Federal Reserve System. While all this may be right and proper, it has always seemed to me that, if the state desires more commercial banks, it should see that they are created by direct processes instead of by listening to the argument that equity requires other types of institutions to be protected against commercial bank competition.

The existing system, moreover, is replete with inconsistencies and impartialities in the treatment of particular types of institutions. Why New York savings and loan associations, for instance, should be permitted to pay a higher rate on savings shares than mutual savings banks are permitted to pay on savings accounts is a matter that has often been explained to me but without leaving any enduring understanding. Finally, and probably of more interest to economists, is the fact that the different institutions do not constitute a system as a whole that tailors as well as it should the flow of savings to the needs of borrowers in the community wherein the savings arise.

Time does not permit comprehensive consideration of the means of implementing needed reforms in the structure of state-sponsored, thrift-mobilization institutions. For those, however, who sometime may have the assignment of making recommendations to state legislatures on this question I would suggest that consideration be given to the encouragement of mergers among the varied types of thrift institutions so that, thereafter, they would operate as separate departments of a consolidated organization, each with its assets segregated, instead of as individual corporate entities. If such department stores of thrift could once blossom, plans of banking integration could then be promulgated without encountering as much opposition from special interests as now would originate from the necessity that each type of institution be protected against other types.

Efforts to systematize the organization of noncommercial banks will be complicated by the fact that there will be forty-eight state legislatures with which to deal. But it should be remembered that a comprehensive reform plan adopted by a single state would tend to be studied carefully in other states. Without being oppressive, moreover, the activities of the federal insurance agencies might be so directed as to

lend encouragement to the wise integration of local banking institutions.

In conclusion it may be reiterated that what is here advocated would tend to unify credit and supervisory authority over commercial banks in the country's central banking system; would preserve the office of Comptroller of the Currency; would maintain a position of reasonable influence for the FDIC;¹³ and would respect state authority to the fullest extent compatible with the necessities of structural simplification of our commercial banking system.

Although it now seems impossible ever to lessen the authority of an existing credit agency, or the powers of particular classes of banks, future economic necessities may well be such as to create an overwhelming demand for genuine reform. Economists should at least be prepared for such an eventuality.

¹³ The FDIC and the Federal Savings and Loan Insurance Corporation would continue as supervisory agencies for those state-created institutions that desire broader insurance coverage than could be provided by a state insurance system. Perhaps the appropriate time to combine the FDIC and the FSLIC would be after significant progress has been achieved in merging state thrift institutions.

DISCUSSION

HOWARD H. PRESTON: It is a pleasure to discuss Dr. Abbott's paper for three reasons: First, I find myself in general agreement with the fundamental features of his analysis. Second, he has tentatively proposed certain courses of action without insisting that they offer a final answer. This opens up topics for comment without being controversial. Third, and by no means least, the paper reached my desk exactly thirty days before I entrained for this meeting. I desire to put this in the record as an example to all other participants on programs of the annual meeting. Unfortunately, it deprives me of any valid right to use the well-worn excuse of discussion leaders that they have not had an opportunity to fully digest the major paper.

Before analyzing some of the points where we may disagree, I want to point out and emphasize certain major features of the paper that deserve special commendation.

Dr. Abbott has directed his attention to the broader aspects of public debt management rather than solely to commercial bank government security portfolio management. He has properly stated that debt management for banks cannot be treated independently of other nonbank security holdings. He indicates the importance of debt management and has cited a number of questions which need to be carefully considered in formulating policy. He urges that the interest charges should be held down and that the debt should be managed in such a way as to prevent it from becoming a factor of instability in our economy. He calls attention to the fact that a public debt may serve some beneficial public advantages. For instance, it may become a medium for the accumulation of savings. He does not give as much time as we might wish to the general objectives of debt management, but undoubtedly found that the limitations of time and space required him to stick rather closely to the narrower aspects of the subject.

As a representative of the Pacific Coast I desire to point out some respects in which our situation does not follow the national pattern. In the first place, our commercial banks are not as "commercial" as those of New England and the Middle Atlantic States. You may not be aware that the Bank of America has over two billion savings and time deposits. This is more than three times as much as the largest mutual savings bank in New York. The same condition exists in the Security-First National of Los Angeles, largest bank in Southern California. Oregon too has few exclusively savings banks. Washington, on the other hand, practices mutual savings banks and boasts the largest savings bank west of Cleveland. Hence the larger Seattle banks are more commercial than those of other Coast cities. The condition which prevails in Coast banks is found also in most Midwestern, Western, and Southern states.

While it is not inappropriate for banks of this type to hold a higher proportion of government bonds to total assets than the more definitely commercial banks, this is not the case.

According to the figures presented by Dr. Abbott, government securities made up 55 per cent of the assets of all national banks on June 29, 1946.

In Seattle on June 29 the banks, including savings banks, held just slightly more than 50 per cent in United States securities. Our largest national bank reported 242 million of government securities at the year's end (December 31, 1946) out of total assets of 656 million; i.e., 39 per cent. Significantly, the total of United States securities was down 129 million for the year. Deposits were off 55 million; loans and discounts were up almost 50 million; the remaining 25 million decline in government securities was offset principally by increases in state and municipal bonds and cash. It is not safe to generalize from the statistics of one institution, but the figures of all Seattle banks point to a substantial reduction of demand deposits, due to withdrawals from war loan account, to a more than equivalent reduction of holdings of government bonds and to an increase in loans and discounts. These trends are wholesome. I am fully aware that deposit reduction was due to cutting the war loan account. That it resulted in a cut in bank-held federal securities is all to the good.

My own points of difference with Dr. Abbott's paper are, first, that I do not consider that the Board is quite so helpless as he has indicated. He does not take specific account of the things that have already been done and the power which the Federal Reserve System has still at hand, unused. In my opinion, he has overemphasized the power of the Treasury to control the money market. For his position with respect to the lack of authority by the System, he has the support of the Board of Governors in its last annual report, which states in substance that the Board is not master in its own house. On the other hand, in a recent address before the New Jersey Bankers Association, Mr. Allen Sproul urged that the Federal Reserve authorities concentrate upon doing what can be done with its present powers in co-operation with the Treasury. He reminds us that in recent months three things have been done: the elimination of the preferential discount rate, the increase in the buying rates for acceptances, and the retirement of government debt of the Treasury balances. These he refers to as a modest program, but, some genuine gains have been achieved in stiffening somewhat the short-term money rates and in cutting down the total volume of bank-held government bonds. With this has gone a fairly substantial reduction in the total demand deposits of the member banks. There is still some opportunity to raise reserve requirements in New York and Chicago, and the Board can do something toward credit control through the open market. Admittedly, here the initiative lies more definitely with the member banks and this appears to be the basis for the claim on the part of the Federal Reserve authorities that added powers are needed.

We turn now to the proposals which Dr. Abbott has tentatively made and referred to as "devices." The first of these is to limit the Treasury's power to determine the maturity pattern of the public debt. In proposing this he has especially in mind restricting the percentage of short-term securities which may be issued. He has stated that he anticipates objection to this suggestion and I shall not disappoint him. My objections are that, in the first place, his thesis that the Treasury can determine rates, terms, and

conditions overemphasizes the power of the Treasury with respect to control of the money market. Actually, the Treasury must meet the market. Its officials must be alert to discover whether there is a market for long-term securities outside the banks and to tap that source. If they cannot find any such demand in existence, it will be necessary to turn to the banks for short-term offerings. In my opinion it would be unwise to tie the Treasury's hands by legislation, by requiring a fixed maturity distribution of the debt. Management should be flexible to meet changing economic conditions. It does not seem practicable to put into the hands of Congress the day-to-day administration of the debt.

His second proposed "device" is to amend the Revenue Act to provide small tax incentives for the purchasers of federal obligations. His suggestion takes two forms, first, to exempt, to the individual taxpayer, interest on federal securities up to say \$200 per annum. The purpose of this is to tap funds now invested in municipal bonds. The second tax incentive which might be used, according to Dr. Abbott, is to exempt a portion of the individual's current income from taxation, provided this portion were invested in special very low-rate government bonds. It will be noted that the first of these does not suggest issuance of bonds which are themselves tax exempt, but is simply a deduction from income. At the present time, interest on certain bonds issued prior to March, 1941, carry limited exemption provisions without affecting materially their sale. Nevertheless, his proposal amounts indirectly to tax exemption on government securities and, in my opinion, is a step in the wrong direction. We should press for abolition of exemption on existing securities rather than to add to the list.

With respect to the other type of tax incentive—the proposal to exempt a modest portion of an individual's income from taxation if invested in government securities bearing a nominal rate of interest—the proposal is rather too indefinite to criticize specifically. If I understand him correctly, it would amount to granting a deferment of income tax and might be quite advantageous to a large taxpayer. While he recognizes the regressive feature of this proposed program, he has not given this aspect as great weight as I feel it deserves in making the suggestion.

His third "device" is to permit the investment of a portion of the legal reserves of member banks in special very low-rate government securities. This is not to be confused with the Board's proposal to invest a designated portion of the member banks' secondary reserve in government bonds and is not accompanied by a suggestion of increasing reserve requirements. Since no interest is now earned on legal reserves, there seems to me no reason to pay any interest, even of $\frac{1}{4}$ of 1 per cent, on bonds which are to be part of the bank's required reserve. This is especially true since they must necessarily be convertible into cash reserve on demand. Presumably this small interest rate is provided as an incentive to "induce" banks to buy these government bonds and hold them. Under present conditions, bank earnings do not need to be bolstered by paying interest on legal reserve. Unless coupled with an amendment to permit increase of present reserve require-

ments, this proposal does not commend itself to me. Dr. Abbott, himself, raises two objections to it which indicate he has practically convinced himself of its undesirability. His objections are (1) it would result in further concentration of the debt in the hands of the banks; (2) it would result in inflationary pressure from refunding nonbank-held securities into this class of bonds.

WILLIAM R. WHITE: Professor Reed has made six recommendations for correcting what he regards as basic faults in our banking system:

First, he would apply deposit reserve requirements of the Board of Governors to all banks engaged in the business of accepting demand deposits. He would accomplish this by requiring all such banks to join the Federal Reserve System. Second, he would place in the Board of Governors authority to examine and supervise all demand deposit banks. Third, he would have the Federal Reserve System absorb the office of the Comptroller of the Currency. Fourth, he would deprive the Federal Deposit Insurance Corporation of all examination and supervisory authority over commercial banks. Fifth, he would vest all power to charter banks in the respective states. Sixth, he would leave with the respective states authority to charter savings institutions and examine and supervise generally the function of accepting savings deposits.

Suppose we begin by examining Professor Reed's paper from the viewpoint of the advocates of strongly centralized control over banking. Most such advocates will approve his thesis that unification should be effected through the Federal Reserve System, but many of them will reject other features of his plan. Some will go so far as to agree that the Board of Governors should have authority to supervise as well as fix reserves for all commercial banks, including those operating under national charters, but many of them will regard as impractical and unwise the suggestion that the power to charter commercial banks be vested solely in the states. They will view it as impractical because it would require, perhaps against the wishes of stockholders, the conversion of all national banks from national to state charters; impractical also because of the probable impossibility of obtaining enactment in all the states of uniform laws governing the issuance of charters; unwise because as long as the states have power to issue charters and enact laws respecting banks they remain in a position to hamper or perhaps nullify the policies of the Board of Governors. For these reasons most of the advocates of more complete unification of banking will feel that Dr. Reed's plan fails to go far enough. They will say that in dealing with these problems there has already been too much compromise with the states, and that the time has come to give the Board of Governors full responsibility for the regulation of our commercial banking system.

Also, in its treatment of savings institutions Professor Reed's paper will disappoint the strict advocates of modernization of banking through unification. It is contrary, they will say, to the wishes of the public, as evidenced by the success of the Federal Savings and Loan Association move-

ment, the expansion of the Postal Savings System, and the Treasury's accomplishment in the sale of war and savings bonds. The segregation in all banks of commercial and savings departments, with the former subject to federal supervision and the latter to state control, will, in their opinion, make for even more conflict and confusion than now exists. Finally, they will argue that the national government, faced as it is with a tremendous problem of debt management, should have more not less control over the reservoirs of savings.

Let us now look at Professor Reed's recommendations from the viewpoint of those who are unconvinced that the centralization of authority over our banking system would benefit the nation. I include myself in this group.

Professor Reed crosses the most important bridge on the road to a completely centralized banking system when he advocates that all commercial banks be required to join the Federal Reserve System. Once this step is taken the other changes which he recommends become mere details in the over-all plan. The FDIC would cease even under present practice to examine insured commercial banks once they became members of the System, and whether the Comptroller of the Currency continued to keep his office at the Treasury would matter little. With its authority extended over all commercial banks, the Federal Reserve System would no longer find it necessary to enlist the support and co-ordinate action of other supervisory agencies. It could prescribe reserves, make regulations, and adopt standards of examination without regard to other agencies and without fear that offended banks might withdraw from the System.

The answer to this basic question presented by Professor Reed, of whether all commercial banks should be required to join the Federal Reserve System, is not as clear to me as it is to him. To him the report of the Board of Governors for the year 1938 was a convincing document. That was the report, you may recall, that attempted by the use of a chart to portray a hopeless condition of conflict and confusion among the various agencies having supervisory power over banks. It is true that differences of opinion and overlapping authorities among the various agencies existed then, and still exist in some measure. The problem, however, was grossly exaggerated by the Board's report for 1938. In the first place, let us remember that national banks are examined only by the office of the Comptroller of the Currency, state member banks only by the states and Federal Reserve System, and nonmember banks only by the state and the Federal Deposit Insurance Corporation. Many years ago uniform standards of examination were agreed upon among the states and the federal agencies, and by conducting examinations jointly in cases where banks were subject to more than one agency, duplication of work was largely eliminated. On paper it may appear more efficient to vest sole examining and supervisory power over all banks in one agency of government, but such a step would not necessarily result in wiser or more efficient supervision. On the contrary, I suggest that our present methods and standards of supervision, representing as they do the composite views of all federal agencies and the various state banking departments, make more practical

sense than they would if they represented only the knowledge and experience of a single organization. My own view, based on experience in supervision in New York and close association for many years with the federal agencies and other state banking departments, is that the faults of our present supervisory structure do not constitute sound grounds for vesting sole authority over all commercial banks in the Federal Reserve System. The overlapping jurisdictions and the inconvenience resulting therefrom is a small price to pay for the safeguards against arbitrary action inherent in the checks and balances of our present system.

Professor Reed's second reason for advocating compulsory Reserve membership is based on what he regards as need for uniformity in reserve requirements. With great hesitation I venture to touch on this point because I know that any discussion of it may draw me into that vast controversial problem of credit and monetary control.

The adoption by Congress in 1933 of an act authorizing the Board of Governors to raise or lower reserve requirements within certain limits tended to focus attention upon reserve requirements as an instrument of credit control. As bank deposits piled up the Board used its new power to reduce the volume of investable funds, and at the same time deplored its lack of authority to enforce the same requirements upon nonmember banks. The state bank supervisors, desiring to co-operate with the Board, secured the adoption in a number of states of legislation permitting the state bank authority to change nonmember reserve requirements from time to time in order to maintain parity between requirements applicable to nonmember and member banks. This development has become an important factor in depriving nonmember banks of any advantage they might otherwise have over member banks in the matter of required reserves. Finally, it is important to bear in mind that nearly 90 per cent of the deposits of all commercial banks are held by member institutions. While nonmember reserves on deposit in correspondent banks, less the correspondent's required reserve, continue to constitute investable funds in the banking system, the fact remains that the Board of Governors, even under present laws, is able to exert highly effective control over the nation's commercial banks in the matter of reserve requirements. Talk of requiring all banks to join the Federal Reserve System to facilitate the development of monetary control puts the cart before the horse. We ought first to decide how much monetary control we want, and to what extent such controls are to be vested in the Board of Governors. Here and there we find wartime measures and a few peacetime laws conferring authority upon the Board to take action affecting the supply of money and credit, but Congress seems never to have decided that we want in this country full-scale monetary management. In the future we ought to deal with this question squarely and openly rather than piecemeal and in connection with other subjects which obscure the meaning and purpose of the parts dealing with monetary matters. Unless we are willing to say, as I think most of us are not, that our experience thus far with monetary controls has produced satisfactory results, then we had better refrain from strengthening the position of the advocates of this doctrine, which we

would be doing by forcing all commercial banks to join the Federal Reserve System.

RAY B. WESTERFIELD: Professor Reed is especially fitted to speak on the subject of banking reform. Through his service on the New York State Banking Board, he knows well the state-chartered and supervised institutions and their problems, and the bulk of his writings and research has been concerned with credit control on a national level. He is by nature studious and judicious, and not given to upsetting pronouncements uttered for vain glory or for love of disturbance. His proposals deserve the most sincere consideration.

To many of them I am quite ready to agree. I favor, for instance, letting commercial banks operate savings departments and not requiring that savings be handled exclusively in separately chartered specialized institutions. In these banks I favor the segregation of the demand deposits and savings deposits and the respective assets supporting them. The funds offsetting the demand deposits should be loaned and invested only in restricted ways consonant with the high liquidity required against such liabilities; but greater liberality might well be allowed in lending and investing the funds received from savers and on time accounts. The legal provisions and supervisory regulations applicable to the loans and investments of savings banks should apply to the savings departments of the commercial banks; and, likewise, the prescriptions as to reserves, maximum interest rates, and withdrawals should be the same in the two types of institution. The basic functions of savings institutions are to assemble current savings of the people and to invest them in safe ways, and if a commercial bank assays to function as a savings institution it should to that degree at least conform to the same code as the specialized savings institution.

The wisdom of requiring segregation of the assets and liabilities of the savings department was demonstrated in the twenties by the fact that in thousands of bank failures the savings depositors received proportionally less in the final liquidation of assets than the demand depositors. The reasons for this disparity were that the demand depositor is more "frequently a person of sufficient contacts or knowledge to withdraw his account prior to failure; or he is, at the same time, a depositor and his deposits are offset against his own liability to the bank." Segregation also reduces the facility of shifting demand into time accounts, or vice versa, thereby saves confusing the two and making regulation difficult.

In the next place, I agree to the proposal that the specialized savings and other financial institutions should be under the state charter, supervision, and examination. As Professor Reed says, these institutions are engaged in the assembly and investment of funds already existing, for the convenience of the people of small means in the local community; they do not create check-book money; their influence on price levels and business activity accrues through the slow route of saving and investing, which in large degree ignore the size of rate of interest received, the reserve ratio required, and other common means of credit control.

I believe in competition, in the maximum degree of laissez faire which can be tolerated, and in the minimum of government interference with financial as well as other institutions. I would let these various specialized institutions quite freely take on one another's supposedly unique functions so far as any institution desired, but if any function was assumed it would have to be done according to uniform pattern set by law and the supervisory authority. The only function I would exempt would be the handling of demand deposits and their creation. The bickerings between the savings banks, commercial banks, and the savings and loan associations mentioned by Professor Reed arise largely from the effort of one group to get or preserve a monopoly of certain activities. The commercial banks and trust companies have been most aggressive in invading the provinces of the savings banks and savings and loan associations. They, through their size and importance, dominate the supervisory authority and influence the legislatures and get what they please. There is no equity in such a one-sided supervision and grant of privilege.

If commercial banks and trust companies, whether state or federal chartered, operate savings departments, trust departments, and other departments not directly concerned with demand deposit banking, these departments should be subject to supervision and examination by state authorities.

As for the larger picture I do not agree to the proposal to abolish the national banks or to settle all commercial bank examinations in the Federal Reserve bank. The fundamental reasons activating these proposals are the facilitation of credit control and the innate craving for order as against confusion and duplication. As for credit control, there is a minimum of success in the history of Federal Reserve control of credit, and the grand reasons for this chronic and quite universal failure do not subsist in the things which Professor Reed would correct by his plan. The trouble has lain not in the confusion and duplication cited, not in the fact that the Federal Reserve Board lacks power, especially since 1936; that five bodies exercise certain controls over the banks; that there are forty-nine jurisdictions which co-operate none too well; or that the laws with respect to reserves, real estate loans, branch banks, and other things are not consistent. The trouble has been, rather, in the theory of control underlying the Federal Reserve System, in the theories used by the authorities, in the personnel of the Federal Reserve authorities, in the capricious and ill-timed application of control devices, in the political and Treasury domination of the Federal Reserve Board, and in the contradictory objectives sought at one and the same time by the Board.

Having just made a series of mistakes in credit control in 1937-38, precipitating a crisis which they had been building up by several years of inflationary efforts, exhibiting a confusion of mind in insisting on easy money and resisting its theoretical consequences, and seeking an alibi for their failure as well as something to distract the public till the storm abated, the Board published its famous report, *Problems of Banking and Bank Supervision*. The report dwelt at great length on the competitive disadvantages visited upon national banks and the members of the Federal Reserve System by the variety of laws and jurisdictions to which they are subject; upon the diffusion of supervisory responsibility and the difficulties of effective co-operation among the super-

visory bodies; and upon the conflict of credit policies pursued by the Federal Reserve authorities and by those in charge of the examination and supervision of banks. The purport of the report was to have the public believe that the cause of failure of Federal Reserve credit control lay in these three fields.

You will recall that the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the state supervisory authorities were subjected to a tirade of criticism by the Administration during the period 1934-37 for insisting upon safety in the banks' loans and investments. The Administration held that this insistence prevented the banks from taking proper chances and therefore from facilitating the recovery. One leader charged that the banks were "subject to outmoded, unintelligent, and officious examiner criticism." The facts were (1) that the banks, for good and substantial reasons, did not care to loan and invest and shifted the onus of refusal to the examining bodies, and (2) that the several investigations launched to determine whether bankers were on strike found a minimum of evidence for it. The failure of pump priming, easy money, and government spending to conquer the depression could scarcely be attributed to the examining bodies, but that was what was done.

I favor turning the examination of all commercial banks over, not to the Federal Reserve banks, but to the Federal Deposit Insurance Corporation. Since 1932 the Federal Reserve authorities, both the reserve banks and the Board, have become utterly political in their outlook and activities; their conception of their functions is to help the Administration accomplish its objectives; they have no independence. Close co-ordination of bank examination and loan and investment policies with national monetary and credit policy under such conditions is dangerous. The extension of the Federal Reserve authority to include a monopoly of bank examinations would make the banks utterly dependent upon and with no recourse from the Administration. To use the bank examination system as a sort of governor of the business cycle, loosening the requirements in times of depression and tightening them in times of boom, is not only the most clumsy sort of control device but one that would surely make for poor banking. It would soon utterly distort the code of bank lending and investing that has been built up through the slow, painful, costly process of experience.

To put the examination of all demand deposit banking under the FDIC would assure independence of supervision, adequate and careful examinations designed to keep the banks sound and safe. Its financial responsibility for deposits of failed banks will assure that sort of conduct. Protection of creditors of banks is and should be the chief purpose of bank supervision. There is no need to reduce the office of Comptroller of the Currency and the FDIC to the status of department of the Federal Reserve banks, and thereby help to justify losses taken on deposit insurance on the ground that they served the alleged bigger objective of credit policy.

Our unit bank system has never been noted for its strength. The failure rate has been notorious. The structure of our system remains the same as it was during the twenties and thirties when half our banks closed their doors. The system has been strengthened somewhat by the insurance of deposits

on a nation-wide basis, but it is impossible to know how much till it is really tested. This increase of strength has been offset in no small part by the decline in the ratio of capital accounts to deposit liabilities. It would seem expedient not to weaken FDIC just when our reliance upon it is greatest.

I do not favor the liquidation of the national banks in favor of the state banks. I regard the former as the bulwark of our banking system. If either must be sacrificed I prefer to lose the state banks. But there is no such necessity. Both types of banks may and should be kept. No doubt it is impossible to put through legislation abolishing either type of bank. Our dual banking system is consonant with the American concept of checks and balances and with the American concept of state and federal government. These concepts are fundamental to the preservation of our birthright. In too many ways and to too great degree are the states nowadays being invaded by federal authority. I would let them continue to charter banks and to supervise them in their nondemand deposit activities.

On the other hand, all demand deposit banks should be required to be members of the Federal Reserve System and also to be members of the Federal Deposit Insurance System; and should be made to conform to a single pattern as regards reserves, branches, capitalization, loans, and investments. Under this arrangement there will be opportunity for certain jurisdictional conflicts, but they can be resolved by co-operation that can soon become traditional and have nearly the force and stability of law somewhere on this side of unchangeable rigidity.

THE CHANGING CHARACTER OF MONEY

WHAT RIGHTS SHOULD THE HOLDER OF MONEY HAVE?

By KARL H. NIEBYL
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The following discussion of the rights of the holder of money is part of a discussion which is designed to clarify the changing character of money. The paper is therefore not focused on an exhaustive treatment of the rights and implied duties of the money holder, but concentrates upon some particular aspects of these rights—those, namely, which seem to exhibit clearly and perhaps typically the change in the function of money that is taking place in the present period of economic development.

There are any number of points of departure for the purpose of establishing the theoretical framework within which we hope to arrive at some meaningful answer. We might ask, for instance, who the holders of money are. If we add to this question the query, what are the holders of money doing with the money, we are facing at once the question as to how to appraise the significance of their operations and of their position. Neither can we trust implicitly the theoretical tools with which we are provided for this purpose by received doctrine.

If we make, for instance, the conventional distinction between holders of money for the purpose of acquiring consumption goods, and those who at least ultimately hold the money for investment purposes, we find that while our concepts can boast a venerable age, the content to which they once referred has long ceased to exist and quite new wine is filling the old bottles. In the seventeenth and eighteenth centuries and even to some extent in the nineteenth century, the money economy did not, e.g., embrace the mass of the common people, i.e., that group with the rights of which we were so seriously concerned in the recent discussions around the OPA. And the rights of the merchant in the eighteenth century were quite diametrically opposed to the rights of the accumulating entrepreneur of the early nineteenth century in a struggle which found its classical ending—functionally at least if not ideologically—in the Bullion Controversy.

Today the modern money economy *does* embrace all members of society, and the problem of purchasing power has become a major subject of discussions on the function of money. And at a time when the National Bureau of Economic Research reports that in the period from 1921 to 1939 the primary sources of funds for business enterprises are funds retained from operations, short-term borrowings, and

only lastly security sales,¹ that bank loans of manufacturing and trade were unimportant as a source of funds,² and that the large manufacturing and trade concerns as a group had become the net creditor rather than the debtor of the banking community over the two decades studied,³ it is perhaps becoming respectable to suggest that the monetary position of the entrepreneur, so sacrosanct in the nineteenth century, has once again undergone a rather fundamental change.

With money in the form of purchasing power in the hands of the large masses of people and money in the form of funds retained from operations as a major source for accumulation in business, we have possibly two representative examples of holders of money at the present time. We shall now look for a representative operational situation in which it might be possible to study and bring into relief the changing character of money.

A most serious problem to the holder of money is considered to exist in the possible changes of value of the latter. The businessman, it is maintained, cannot calculate intelligently in an atmosphere of uncertainty either his production or the volume of funds needed for investment. The people as human beings are forced to react to price rises which dissipate their income in terms of wage movements and then are said to accentuate the assumed uncertainty. In the discussions preceding the abolishment of the OPA—as in the discussions during the recent war—the danger of what Professor Hirsch has called the “inflation bugaboo” had been painted black; and in their *apologiae pro vitae suae* all too many of our economists continued happily to talk about a free-market economy in which the present prices were supposedly functional dependents of our present-day wages, and in which profits were of course identified with the ability to stay in business. In the words of the title of our paper: a condition in which one group of holders of money, the people, were misusing their “rights” to the detriment of another group of money holders; namely, business.

The operational situation, then, for which we have been looking, is ideally represented in the condition usually referred to as “inflation.” To quote at random a simple definition of the traditional formulation of inflation from the *Federal Reserve Bulletin*: “Inflation occurs when the money actively bidding for goods and services increases faster than the available supply.”⁴ May we amplify this assuredly simple definition with the equally assuredly simple proposition by which the present situation is characterized. Shorn of its decorative intricacies,

¹ Albert R. Koch, *The Financing of Large Corporations, 1920-39* (National Bureau of Economic Research, 1943), p. 5 ff.

² *Ibid.*

³ *Ibid.*

⁴ *Federal Reserve Bulletin*, April, 1941, p. 291.

the present "inflationary" price increases are said to have resulted from preceding cost increases, and the public is given the choice between considering the workers as profiteers because of the money-wage increases received during the last year, and to some extent during the war, or as lazy because of a presumed decrease in productivity. Is this really what characterizes the present situation?

History if taken in its concrete events and not merely in semantic reflections, is a valuable teacher. Milton Gilbert, in his little study on *Currency Depreciation and Monetary Policy* several years ago, came to the same interesting conclusion that undoubtedly many of us had come to, that "since the development of modern credit money all the major cases of depreciation had occurred in conjunction with or as a result of armed conflict. It was war which brought the unbalanced budgets, the large credit inflations, the evaporation of gold reserves, and finally the suspension of gold payments and consequent depreciation."⁵

The usual explanation for the inflation phenomenon—that it represents the dislocation of normal economic behavior patterns through war and the absence of an adequate preventative machinery—is too easy to withstand critical inquiry. There were indeed organic reasons for such monetary disequilibria at such times. The expansion of industrial society did not proceed in a planned manner. Far from it, it progressed by fits and speculation. And even the successfully expanding enterprise faced an absentee-proprietor claim which continued to require debt-service quite irrespective of the material life of the real investments. Thus there was need, dire need, for the periodic disclaimer of such eternal demands, and the process of this disclaiming had to be such as not to endanger subsequent new capital supply, badly needed as long as industrial expansion was proceeding to ever wider horizons. Such situation was ideally provided in war and postwar periods in which the blame for the event could be squarely placed in typically illegitimate fashion upon the wrong father: the famous extra-economic forces.⁶

Inflation in the good old days was directed at the growing number of capital owners. They as the holders of money were the victims of an assault which in its wake made the workers and farmers—increasingly a part of the integrating money economy—suffer severely, too. A solution of this danger to their rights as property owners, the holders of money capital or capital claims found only in the lofty heights of *ceteris paribus* economics.

⁵ Milton Gilbert, *Currency Depreciation and Monetary Policy* (University of Pennsylvania Press, 1939), p. 1.

⁶ Cf. Joseph A. Schumpeter, "The Decade of the Twenties," *American Economic Review*, May, 1946, p. 9.

This danger to the holders of money was contingent, then, upon the continuation of the basic condition which created it: the need for capital to serve the expansive needs of an industry the perennial condition of which it was to be in debt.

These conditions have changed materially during the last twenty-five or so years. The results of the changes are best illustrated in the findings of the above-quoted study of the National Bureau of Economic Research, according to which large manufacturing industry issued 6.5 billion dollars of securities during a period of approximately twenty years, during which same period it bought back 7 billions worth of its own and other securities.⁷ Truly the picture of capital accumulation has fundamentally changed!

If there is no point, then, today in using the inflation mechanism for the disposing of an inherited indebtedness, what then is the purpose of the present supposedly inflation-like price movements?

Let us recall our earlier observation: the existence of the people, workers, employees, small traders and businessmen, farmers and professionals, as cost factors to industry. Mr. Keynes had observed a little earlier than some of our colleagues that the old method of effecting periodic wage reductions or preventing increases in a factory-by-factory manner had become obsolete in an age of trade unionism. He therefore proposed the very means that is being used today so broadly and effectively: price increases.⁸

In an age of monopolistic production control, the holders of money, i.e., by far the majority of the people, are the pawns of the monopoly price; if real incomes show a tendency to go beyond the point which yields the largest profit to industry, price increases are brought about for the purpose of enforcing a declining output traditionally attending monopolistic practices.

There is no time here to enlarge on the latter point which to the superficial observer seems to be contradicted by the apparent continuation of near-to-full employment. It must suffice here to say that real consumption has not increased materially in the last few years, and more recently it has begun to decline absolutely.

There is a second point that needs making in these days of changing governmental policies. In spite of record profits last year, Congress is proposing what even the daily press is calling a millionaire's tax cut. The lessening instead of sharpening of progressive taxation will further demonstrate the actual independence of business of demand, and serve as a further instance of a general attack upon the holders of money, in this case the common people.

⁷ Koch, *op. cit.*, p. 7.

⁸ Cf. John Maynard Keynes, "The Income and Fiscal Potential of Great Britain," *Economic Journal*, December, 1939, pp. 630-631.

But what about business itself? Is it not true that the great liquidity of business exposes it most directly, as money holders, to the evils of inflation? We have stated above that the point of the present—and I may add, controlled—price rises is to effect a general decrease in cost and thus an increase in profits. While these profits are under the conditions of monopoly not endangered by any possible effects on sales, they seem to be exposed to devaluation through price rises. And here we find indeed a second basic difference between the old type inflation proper and the present cost-curtailing price movements: the limit to inflation proper was the extinguishing of indebtedness. The degree to which that goal was reached was dictated by the actual circumstances; i.e., how much of a burden on the money holders could be permitted without serious repercussions. The limits to the price rises in the present and in recent years is set at the point where the decrease in value of the liquid assets of industry (and agriculture) occasioned by the price rises comes dangerously near to equalling the profits gained by the reduction in cost occasioned by the same price rises.

What rights should the holders of money have—that is the title of our paper. We have tried to establish in our minds the conditions in terms of which a suggestion towards a meaningful answer might be possible. The conditions we found relevant have not included the traditional considerations of the gold standard, paper, commodity or whatever mixed standards, international currency relations, etc. They were excluded not because the aspects of the problem which they represent are not relevant. It was only that their meaningful consideration implies clarity on those basic conditions, conditions representing indeed a “changing character of money,” to which we have restricted our paper.

Rights, properly defined, are always correlatives of duties; i.e., actions necessary in the motion of a given context. I say advisedly motion, of a given context. The present tendencies in our economic organism are pointing towards an enormous acceleration in the concentration of capital. The effects of this development, actual and possible, upon the holder of money have been indicated above. These tendencies point at the same time, however, also toward the emergence of institutions, economic and political, in which the rights of the holders of money may be determined by production relations contradictorily opposed to monopolistic restrictions. Which rights, then, the holders of money should have will be a function of the economy, and that is the world economy, which we are in the process of building. As in all matters human and social, the look into the future cannot help but present us with a choice in the present. The alternatives involved in this choice were, I hope, not entirely obscured in this paper.

MONEY AS PURE COMMODITY

By BENJAMIN GRAHAM
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Money has the aspect of "pure commodity" insofar as it consists of or is backed by one or more commodities with substantial intrinsic value. From the earliest times, money has derived either all or a good part of its value from its physical or legal relationship to monetary commodities, usually gold or silver. More recently it has appeared, conversely, that a good part of the value of both silver and gold is derived from their status as monetary metals. This latter fact suggests that a new stage in monetary technique may be appropriate, in which monetary status and pure commodity value are made reciprocally beneficial. That is, money will be benefited by commodity backing and commodities will be benefited by monetary status.

Historically, money's identification with pure commodity values falls into three stages: being first complete, then partial or fractional, and then completely absent.

The first stage is characterized by Aristotle's statement that "the substance of money should be something which is intrinsically useful and easily applicable to the purposes of life—for example, iron, silver, and the like."¹

The emergence of gold as the primary monetary commodity, and the defeat of its rivals, seems to be associated historically with a gradual loss of emphasis on its pure commodity aspects, and its assumption of what R. H. Brand called "a certain mystic quality."² Thus through the ages gold appears to have transformed itself slowly from pure commodity into pure money—from the physical to the metaphysical. At a point just before World War II it threatened to lose all its contacts with human realities—at least in the Western World.

In the second stage, all forms of money are legally exchangeable for gold, but the quantity of gold available is much less than the money claims against it. Under the Federal Reserve System, prior to 1934 the relationship between our paper money and gold was about the same as that between our demand deposits and currency. In either case complete convertibility existed *de jure*, but *de facto* convertibility depended on the absence of mass conversions. In this stage the relationship between money and pure commodity has become ambiguous in several respects—including uncertainty as to how much pure commodity value resides in gold and silver.

¹ *Nicomachean Ethics*, Book V.

² *The Times* (London), June 16, 1937.

The fractional aspect of pure commodity backing in the second stage may be illustrated by the ratio of our gold holdings to the total of currency outstanding plus "adjusted" demand deposits. (In the balance of this paper the word "money" will refer to this total.) The ratio was 18 per cent in 1900, 16 per cent in 1929, over 50 per cent in 1940, and again at about 18 per cent at the present time. I shall mention, but not dilate upon, the additional role of gold under the gold standard as regulator of both the internal credit system and the import-export flow. These functions arise, I believe, not from the quality of gold as commodity but from the formal monetary structure.

As is well known, Adam Smith and Ricardo considered a nation's stock of monetary gold and silver as akin to economic waste. They preferred a "well-regulated paper currency";³ but they recognized that effective regulation required the obligation to redeem paper money in gold on demand. Hence in classical theory the metal reserve should be held to the minimum necessary to guarantee convertibility. But the world's inability to keep its paper money "well regulated" led inevitably to the common view that the more gold a nation held the better.

If we view the history of this second stage over a long period, we may be surprised at the success with which bank deposits and paper money have gained acceptance in place of gold and silver. Their sole advantage has been convenience; their crying disadvantage has been that they lack physical substance, and that time after time they have proved a poorer asset than their equivalent in precious metals. For long periods each of us could have held all his money in gold just for the asking, but instead we have preferred bank deposits and \$10 bills. It is clear that most Americans and Britishers, at least, have had very little interest in the pure commodity aspect of gold and silver from the standpoint of joy of possession. Our interest therein has been self-protective or negative. We have desired gold only as we mistrusted paper. Whenever we could trust paper again—and often unshrewdly—we lost interest in gold.

The third stage, in which money is by choice completely divorced from commodity backing, may be said to have existed in Great Britain in the late thirties. Not only did England leave the gold standard under economic pressure—which has happened to many nations—but thereafter she definitely repudiated the principle of gold backing for her currency, as old-fashioned and inherently undesirable. Britain said clearly that she would not go back to gold even if she could—and for

³ *Wealth of Nations*, Book IV, 1. Cf. also Ricardo, *Principles of Political Economy and Taxation*, Ch. VIII: "A currency is in its most perfect state when it consists wholly of paper money, but of paper money of an equal value with the gold which it professes to represent."

some years prior to World War II she could undoubtedly have returned to gold.

England has now accepted a link between her currency and gold, via Bretton Woods. There is no indication in this undertaking that the pound will be given an effective gold backing at home, or that it will have any direct tie to pure commodity values. The pound may be in fact exchangeable for gold in the open market, just as a United States government bond can be exchanged for a gold watch—but this would in no sense be a “pure commodity” aspect such as we have been discussing.

We may add that since 1933 the United States has been in some twilight zone between the second and third stage of monetary development. Legally we are now committed only to maintaining the gold equivalent for the dollar in foreign exchange—which is about the same kind of obligation as England assumes under Bretton Woods. But more explicitly, the Treasury is directed to sell gold at \$35 per ounce when necessary to secure the exchange value of the dollar.

The unparalleled expansion of monetary claims during the war might well be expected to have increased the preference of Americans for physical gold as against fiduciary paper. My inquiries lead to the conclusion that there has been no appreciable hoarding of gold, although the latter was feasible in various ways. Amid all our black markets, we have never heard of a black market for gold in this country—despite its prevalence abroad. To my mind this fact is extraordinary. It indicates that within not more than a generation there has been something of a revolution in the popular attitude toward gold. The man in the street probably subscribes to the recent statement in *Business Week* that “actually gold derives its value from the American dollar today.”⁴ Not so long ago it was everyone’s belief that the money of the United States derived its value chiefly from being backed by gold.⁵

The history of silver has been the opposite to that of gold. Silver has tended to lose in monetary status while it gained in industrial utility. Great Britain has just decided to abandon its thousand-year silver currency, and to melt down all its silver coins, largely in order to supply the nation’s industrial needs for the metal.⁶ During the last war the United States Treasury was compelled to loan out a huge amount of its monetary silver for industrial use—some 30,000 tons, of which nearly half went to the atomic bomb project.⁷ By contrast, the industrial uses of gold in the war were negligible.

⁴ *Business Week*, November 2, 1946, p. 10.

⁵ See discussions of gold premiums abroad in the August, 1946, letter of the National City Bank of New York. We have not space to discuss the “gold premiums” appearing in backward countries and those with depreciating currencies.

⁶ *Financial Times* (London), September 18, 1946, p. 1.

⁷ See article, “Plans to Return Borrowed Silver,” *Commercial and Financial Chronicle*, November 14, 1946.

I should like now to refer to a possible fourth stage in the commodity aspect of money—one in which a two-way exchange is established between paper money and a composite group of basic commodities. It may be thought that this would amount to returning to a combination of the early part of stage 1—in which many different commodities functioned as money—and stage 2, in which more money exists than monetary commodities.

In my view, however, the proposal for commodity reserve currency^a marks a new departure in the monetary field. Its object is not so much to give commodity value to money as to give monetary value to commodities. There should be a real advantage in having our money backed in part by basic commodities—"objects applicable to the purposes of life"—for the generally bad history of unsecured and inconvertible paper money suggests that physical backing and convertibility are desirable attributes of money.

But the novel monetary aspect of the commodity reserve idea is that it is designed to benefit the producers of raw materials by giving them as a group the economic advantages now enjoyed by producers of gold and silver; namely, an unlimited market at a level price for balanced production. As a derived effect, it is designed to protect the entire economy from the baleful results of recurrent wide fluctuations in the market price of basic commodities.

The money of the future cannot again be fully identified with pure commodity values, but it can and should be related to such values. Certain key commodities should form a broad connecting bridge between the world of goods on the one hand and the world of money on the other. The flow of such key commodities into and out of monetary status can supply an important factor of equilibrium, or balance wheel, for the entire economy. As Hayek pointed out,^b gold is no longer important enough intrinsically to perform this role adequately; and the relationship between money and pure commodities should rest in the future on a broader base than the precious metals.

It is difficult to state categorically what advantage will accrue to the huge monetary structure of today if a relatively small amount of pure commodities are placed behind it as security. Future confidence in the dollar will depend in part on government policies recognized as sound, and in part on mass psychology. In this speaker's opinion, the placing of a quantity of basic commodities behind our money will be sound policy, and their presence will contribute to a psychology of confidence in our currency.

^a See B. Graham, *World Commodities and World Currency* (New York, 1944); F. A. Hayek, "A Commodity Reserve Currency," *Economic Journal*, June-September, 1943; etc.

^b Hayek, *loc. cit.*, pp. 177, 178.

THE RELATIVE LIQUIDITY OF MONEY AND OTHER THINGS

By EDWARD C. SIMMONS
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A brief consideration of the relative liquidity of money and other things may serve to throw light on some troublesome matters. If monetary management is to be relied upon, along with fiscal management, to control the level of activity in a free market economy, the quantity of money must have dimensions. If a dividing line between money and other things cannot be established both in theory and in practice, monetary policy discussions are meaningless. Should money be made more like other things? Should other things be made more like money? Should other things be made less like money? These three questions pose the issue. The position is taken here that the gap between money and other things should be made as wide as possible. The wider the gap the more effective can be monetary management.

We begin with the categorical statement that money is different in its fundamental character from securities and commodities. Money serves as a standard of value and as a medium of exchange. Commonly the list of functions is much more extensive, but the tendency to lengthen the list is to be deplored. Conceptually one needs only the minimum essential functions to establish a dividing line, and these two functions serve to bring out the essence of money. That thing which has parity and the capacity to mediate exchange is money, whether it be a pure token or something having value in another connection.

The phenomenon of liquidity appears in the economy as soon as mediation of exchange appears. Conceptually money can exist as a pure *numeraire*, but such a money seems unlikely to exist in fact in a free market economy. Every exchange transaction in a money economy involves two operations—selling for money and buying for money—and momentarily at least money is held. It is self-evident that everyone in society cannot hold all his assets in nonmonetary forms. Some of these assets, although they do not serve to mediate exchange, do approach closely to money in possessing near-parity and in possessing general acceptability in that they may be bought and sold readily. Except in special cases, the movement of these things in and out of the possession of the person necessitates the recording of a book gain or loss on the books of account, which are conducted in conformity with the money illusion.

The inevitable result of exchange mediation is to create in the economy a special type of asset which by its nature serves as a store

of value and a bearer of options. That is not to say that anything which serves as a store of value is money. Approaching the definition of money by this avenue leads only to the conclusion that everything is more or less money. Unless one proceeds carefully, he may find himself arguing that monetary management is impossible since the supply of money is dimensionless.

The store of value concept of money, although not yielding a satisfactory definition of money, does serve to bring out the liquidity problem. A person holding money and certain other assets, securities and nonspecialized commodities is endowed with a wide range of freedom as to time and kind of outlays. He may spend now or later or never.

Liquidity preference is a complex matter. Why does society seek liquidity? There is some minimum of liquidity that cannot be escaped. The institutional factor of payment patterns obliges some persons to hold money. Frequency and regularity of receipts and disbursements and their coincidence set a theoretical maximum to velocity, but beyond that subjective factors operate. In this paper this residual will be lumped under the one broad heading of uncertainty. The cost and bother of investing small sums for short periods serve to explain some money holding, but beyond this persons hold substantial sums either in money directly or in various assets that serve mainly as store of value against some more or less clearly foreseen contingency. The costs of this action are the opportunity costs of foregone returns. But there is some *quid pro quo*, for an economizing decision lies behind the action of holding low yield or no yield or even negative yield assets. Presumably some imperfectly foreseen future gain will offset the immediate loss.

The nature of the uncertainty elements which lead to piling up of liquid assets cannot be explored. However, the general observation may be made that the liquidity problem must be attacked along the lines of the causes of uncertainty rather than by destroying somehow the parity of money.

One school of thought has proposed that money be made more like other things by applying carrying costs to money. Stamped scrip is one of the practical proposals. In essence this requires that hoarding be distinguishable from normal holding over the interval between receipt and expenditure. But hoarding is a normative concept, for all units of money are held for longer or shorter periods because of the lack of coincidence between receipts and expenditures. The practical result of stamped scrip proposals would be to create units of money with varying discounts, or in other words to destroy the quality of parity. Were this not done with great skill, the outcome might possibly be

simply a shift from conventional money to some other thing having greater stability of value. An exchange economy must have a medium of exchange. The liquidity problem cannot be solved by dispensing with a medium of exchange. Attractive as the idea may be at first glance that money should be made like other things, that end is neither desirable nor attainable.

On the other hand, the liquidity problem is not soluble by making other things more like money. That is what we have been busily engaged in doing these past few years. The government debt is our large liquid asset, thanks to our having opened the way to its monetization at the central bank in order to finance the war cheaply. In terms of the small sacrifice of liquidity that has been imposed on government security purchasers, 2 per cent was possibly too high a price to pay to get people to give up money for securities which are only slightly less liquid than money.

We must now face squarely the question of the meaning of liquidity. There are no liquid assets aside from money, unless there is a central bank. In the discussions of liquid assets, it is significant that cash, bank deposits, and government securities are the only things ordinarily considered. Other securities and commodities are not added in when statistical estimates are made. Possibly this is a recognition of the painful truth learned in frequent panics under the national banking system that only a central bank can create liquidity. The shifting of assets among banks, firms, and private persons suffices in normal times, and in periods of boom everything seems to be salable and therefore liquid, but there can be no general movement from assets to money unless the money-creating power of the sovereign is brought into play. At this point, it might be remarked that the gilt-edge quality of government securities rests not only on the power of the sovereign to tax in order to service the debt but also to no small degree to the long established practice of having the central bank stand ready to lend on or purchase government debt instruments. The liquidity of things which may not be absorbed by the central bank is a fair-weather phenomenon. Nonetheless, this fair-weather liquidity is a matter of significance and requires consideration. To the extent that liquidity preference is satisfied in periods of calm by assets that prove to be illiquid in periods of stress, the system is rendered more unstable.

Probably no one would seriously defend the proposition that all things should be made liquid. A monetary policy which would endeavor to make the number of dollars equal to the dollar amount of gross national wealth is patently absurd. Monetary theory has advanced far enough to provide good grounds for holding that even the good bills doctrine is fallacious as a guide to monetary policy. Monetizing all wealth would result only in limitless inflation.

Finally the third question. Should other things be made less like money? This is the really practical question which we now face. We have a large volume of public debt obligations which, under present arrangements, may be converted into bank deposits and currency at the option of the holders. If monetary management is to mean anything at all, the monetary authorities must be in a position to increase and decrease the number of dollars on their own initiative. Really effective monetary management seems to call for open-market operations rather than discount operations, at least where discounting is regarded as a right. Moreover, open-market operations should probably be conducted in assets which are by nature subject to price fluctuations so that the effect of central bank operations will not be to peg prices and thus create a body of near-money assets.

Unless we are prepared somehow to make the transition to this state of affairs, we shall be unable to utilize the very powerful weapon of monetary management in its proper but not omnipotent role of a stabilizer in meeting coming intense cyclical movements of business activity. Our public debt policy has closed the way to the employment of this weapon.

The making of other things less like money is not a futile goal. There is little danger that other things will become money in the modern economy. Interest-bearing obligations are cumbersome at best in the mediation of exchange. Few commodities other than the precious metals have the required attributes to challenge dollars as now embodied in cash and bank deposits. Moreover, the tax power is available to discourage the use of such things. The only real problem is therefore the policy of the central bank; that is, the extent to which other assets will be monetized.

The transition to the ideal world cannot be explored here. In that happy land, the public debt would exist as perpetual consols. Privately-issued securities would exist only in the form of equities bearing no fixed rate of return or no fixed maturity value. The central bank would buy and sell such amounts and kinds of assets as necessary to produce appropriate fluctuations in the supply of money. Probably this ideal world is never to be realized, but contemplation of it may assist us to see our way out of the present muddle.

Making other things less like money will not get at the cause of the liquidity problem, which is uncertainty. A direct attack must be made on that. However, financial reforms that will reduce liquid assets and reforms that will reduce the uncertainties that make the holding of liquid assets desirable are both hurdles to be cleared on the road to greater economic stability.

MONEY AS A CREATURE OF THE STATE

By ABBA P. LERNER
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A favorite pastime at the London School of Economics, where I was first introduced to the subject of economics, was the cruel baiting and tearing to pieces of Professor Knapp's *State Theory of Money*. The chief performer in this sport was Professor Gregory who spent several lectures at the beginning of his course on money in ridiculing Knapp's notions that the value of money derives in some metaphysical manner from the sovereign authority of the state. Gregory held with the classics that the value of money derives from the scarcity of gold and that this scarcity is impervious to declarations by government officials.

Later in the course the state managed to creep back quietly and unobtrusively through its power, via the banking system which it could control, to mitigate the scarcity of gold by economizing in the monetary demand for it. This was done by the substitution of currency and bank credit for gold thus reducing the demand for gold in relation to the supply. There was considerable development of the devices for such economies. Fiduciary issues of currency in addition to that which was backed 100 per cent by gold; fractional backing of currency which stretched gold further; the development of the banking system with the pyramiding of bank money on fractional currency reserves which were in turn backed less than 100 per cent by gold; the use of foreign exchange standards which permitted currency to be used instead of gold as reserves for central banks; and so on through a long list culminating with the temporary issue of "fiat" money, without proper backing, to deal with crises involving an urgent need for liquidity.

But the lesson of the first lectures on Knapp was never entirely forgotten. The money created or expanded by state action was made to recognize its inferiority to gold. It was merely a substitute for gold. Its value depended in the last resort on the gold backing or at least on the ability of the authorities to keep their promises to redeem the notes in good solid gold.

Since then we have been emancipated theoretically from the fetishism of gold. Nearly everybody who defends the use of gold in modern currency systems guards himself by saying that he is doing so only in order to be kind to somebody else's unreasonable prejudices. It is no longer a paradox to declare that the value of gold depends on the possibility of getting dollars for it rather than the other way round. And it is only from inferior textbooks that students are still getting

the impression of some mysterious influence that gold exercises at a distance on the value of the currency backed by it. Even for those who have got no further from gold than to rest their emphasis on the quantity of money, it seems hardly more essential to explain the value of currency in terms of gold backing than to explain the value of gold in terms of its being backed by some still more primitive form of money, such as cattle or fish.

Money, as I have said in an article of that name in the *Encyclopaedia Britannica*, is what we use to pay for things. The basic condition for its effectiveness is that it should be generally acceptable. Its transformability into gold and the guarantee of this possibility of gold backing (or any other kind of backing) are nothing but historical accounts of how acceptability came to be established in certain cases. These were possibly the only ways in which general acceptability could be established prior to the development of the well-organized sovereign national states of modern times. General acceptability had to be transferred in some such way from something which had already acquired it in the course of history. But if general acceptability could be established in any other way these historical methods would no longer be necessary or relevant.

This is just what has happened. The modern state can make anything it chooses generally acceptable as money and thus establish its value quite apart from any connection, even of the most formal kind, with gold or with backing of any kind. It is true that a simple declaration that such and such is money will not do, even if backed by the most convincing constitutional evidence of the state's absolute sovereignty. But if the state is willing to accept the proposed money in payment of taxes and other obligations to itself the trick is done. Everyone who has obligations to the state will be willing to accept the pieces of paper with which he can settle the obligations, and all other people will be willing to accept these pieces of paper because they know that the taxpayers, etc., will accept them in turn. On the other hand if the state should decline to accept some kind of money in payment of obligations to itself, it is difficult to believe that it would retain much of its general acceptability. Cigarette money and foreign money can come into wide use only when the normal money and the economy in general is in a state of chaos. What this means is that whatever may have been the history of gold, at the present time, in a normally well-working economy, money is a creature of the state. Its general acceptability, which is its all-important attribute, stands or falls by its acceptability by the state.

But there is another and much more serious sense in which the state is the responsible creator of money. The second most important problem

that modern civilization has to solve if it is to survive the totalitarian threats to its existence is the prevention of severe inflations and depressions. (The first problem is, of course, the establishment of world peace before we slip into an atomic war by way of appeasement and/or preparedness.)

Depression occurs only if the amount of money spent is insufficient. Inflation occurs only if the amount of money spent is excessive. The government—which is what the state means in practice—by virtue of its power to create or destroy money by fiat and its power to take money away from people by taxation, is in a position to keep the rate of spending in the economy at the level required to fill its two great responsibilities, the prevention of depression, and the maintenance of the value of money.

Up till now governments have shirked these responsibilities, seeking refuge in an alibi of helplessness. The extraordinary complacency both of the government and of its critics in the face of the recent rise in prices can be appreciated only if one imagines what would have been the reaction to a government declaration that it was going to default on say 30 per cent of its interest and repayments to holders of war bonds and other government obligations. An equal despoiling of patriotic subscribers to war loans through the price increases does not prevent the treasury from still advertising government bonds as giving back \$4.00 for \$3.00. Nobody seems to find this dishonest. And even this denial of responsibility is as nothing compared with the way in which nearly all states have nearly all the time permitted depressions to begin, to grow, and to establish themselves without calling into play their power to create the money demand which would have made the depression impossible.

Before the tax collectors were strong enough to earn for the state the title of creator of the money, the best the state could do was to tie its currency to gold or silver which had a stability of their own that antedated the appearance of the state. By that policy extreme inflations were made impossible, and in a small country even small inflations (relatively to other countries) would be checked by the disappearance of the money in an outward flow of gold. By the same policy a limit was set to depressions. For the world as a whole they could not go below the point at which the available and fairly steady supply of gold-money became so redundant on account of the small volume of business (or possibly because of lower prices) that it spilled out into increased spending by somebody who was supersaturated with liquidity. For individual countries special conditions of foreign trading and lending might lead to much worse depressions, but on the other hand any further depression beyond that determined by these special condi-

tions would be quickly corrected by an inflow of gold-money from the rest of the world.

The return to such methods now can only be proposed by exuberant Republicans who have not yet given a second thought to their meaning. The "margin of adjustment" involved in so crude a mechanism—which stretches from the limits of price rises within a gold standard to the level of depression that corresponds to zero net investment—have become wider still. The United States can carry much more inflation than we have so far had without running out of gold, while the level of unemployment that would be possible before a redundancy in the supply of hard money came to the rescue grows greater with our growing productive competence and is now far beyond the limit set by the political conditions for the maintenance of a free society.

No government will be able to sit back and wait for the degree of unemployment which will result in the degree of price fall that will create enough idle money to induce sufficient private investment to start a movement back to prosperity. The New Deal and the war prosperity will have shown enough people that serious depression is dispensable. Some form of functional finance will in fact be practiced by whatever government we have. The only danger is that it will be too little and too late.

Less well worked out is a technique of dealing with the other responsibility of the creator of money—the responsibility for maintaining its value. The key points here are not in the direct supply of money, or even in the regulation of the level of spending. The key points are in the determination of wage rates and in the determination of rates of markup of selling prices over costs.

Wage determination by collective bargaining brought an improvement over the condition of the unorganized worker bargaining with a large employer in time of depression. With the abandonment of severe depression as part of the technique of influencing the determination of wage rates, and with the growth of trade unions to national and international size, the power of the trade unions has become too great for the purpose of determining wages by collective bargaining. Each union is forced to use its power to try to increase the share going to its members even though its more intelligent leaders know that what it gains is not from the employer, who can and will pass any wage increase on in higher prices, but from the population as a whole—which means in the main from other workers and their families. They also know that the other trade unions will have to do the same so that there is nothing left but a general inflation. For any particular trade union to restrain itself in the scramble may merely mean that it is left behind while the inflation continues. So that unless some alterna-

tive mechanism of wage determination is developed, a full employment policy will mean inflation. The acceptance by the government of its responsibility for preventing depression would seem to make it impossible for it to carry out its second responsibility for maintaining the value of money.

On the other hand it seems to be very likely that the Nathan report is right in believing that after the restocking boom the maintenance of adequate spending will be impossible without an increase in real wages; that is, in the ratio of money wages to the prices of finished goods. This is the same dilemma in a different form. Higher wages relatively to prices are necessary for long-run prosperity but raising wages will do no good because they will only lead to higher prices and inflation.

The dilemma can be resolved only by the government going to work on both money wage determination and on markup rates. Both are problems of monopoly and as such are inevitably destructive of a free economy. Markup rates must be reduced by antimonopoly measures of the kind that the government was working on when interrupted by the war. The most important help to the government in this will be the policy of maintaining full employment which will make it profitable for business to work with smaller markups. The effects can be speeded up by the government making the benefits of the full employment more immediately evident to producers by costlessly guaranteeing adequate (or even unlimited) sales of standard goods at moderate prices, releasing the energies and initiative of businessmen from the worries of selling to the concentration on efficiency in production.

The trade union monopolies must be tackled by establishing an artificial free market with compulsory arbitration for wage determination in which both the worker and the employer get a fair deal. Starting from some initial set of wage rates, such as the prevailing rates, wages in general can be raised by 1 per cent about every four months (on account of the secular growth in labor productivity) without the general level of cost and prices having to rise. This would be the basic money wage movement. In areas and industries where the level of unemployment is more than twice the national average the wage increase would not take place. Where the level of unemployment is less than half the national average the wage would be increased 2 per cent instead of 1 per cent.

This would have to be accompanied by measures to maximize the mobility of labor, removing all restrictions on entry to any occupations. The appearance of twice the national average of unemployment would then be evidence that workers consider the existing conditions in the area of industry more attractive than elsewhere, so that it would be

fair for the increase to be forgone. Workers who insisted on the increase would in effect be claiming the retention of an advantage over workers in general.

Less than half the average of unemployment would be evidence that workers in general considered the conditions less attractive than elsewhere. A refusal of employers to raise wages by the required 2 per cent would then be seen as an attempt to maintain substandard conditions. In the end there would emerge a set of wage rates which would correspond to the workers' own estimates of the necessary compensation for differences in net advantages.

I have no time to defend these proposals. They are only intended as an indication of the direction in which solutions to these most pressing problems might be found. I will only make two remarks.

The side-stepping of collective bargaining will undoubtedly be denounced as an attack on labor. It is important to note that it will appear so only to those who in their thinking have completely substituted the labor unions for the workers, raising these instruments for improving the economic welfare of labor to the status of ends in themselves. We should remember that an end in itself is nearly always a means for some end which one does not like to mention aloud, such as the maintenance of the position, prestige, and salary of a union bureaucrat.

The second remark is addressed to another professional group—monetary theorists. I have gone quite a way from the traditional field of monetary theory. I find that this is inevitable if we are to begin to take seriously a slogan which we have been repeating for quite a while now. The problem of money cannot be separated from the problems of economics generally just as the problems of economics cannot be separated from the larger problems of human prosperity, peace, and survival.

THE PAYMENT OF INTEREST ON SERIES E BONDS

By EARL R. ROLPH
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In this paper, I should like to consider whether the interest cost of E bonds to the Treasury is justified in view of the money-like nature of the bonds. The character of the bonds and the empirical evidence suggests that E bonds are weak anti-inflationary debt instruments and that both short-run and long-run policy considerations call for replacing the public's holdings of this type of debt with less money-like types of assets.

Series E bonds are ten-year Treasury obligations issued at three-quarters of their face value. If held to maturity, the annual yield rate is 2.9 per cent. This is a higher rate than that prevailing on long-term Treasury bonds, and as an investment for income E bonds are the most attractive security sold by the Treasury. The offer is limited to sales of \$3,750 issue price to any one person in a calendar year—an effort to prevent the wealthy from getting an unduly large return merely by holding government debt. The interest return on E bonds is less than 2.9 per cent if bonds are cashed prior to maturity. No interest is paid if bonds are cashed within a year of acquisition, and only 1.75 per cent annual return is realized if bonds are redeemed five years after purchase. As a result, owners of E bonds which have been held for more than five years forego over 4 per cent return by cashing them as compared with holding them to maturity.

During the war period, the campaign to sell government debt to individuals rather than monetize it through the banking system was centered on pushing the sale of E bonds. In some respects, this program was a remarkable success. Federal Reserve studies of riskless asset holdings indicate that early in 1946, 63 per cent of the spending units in the United States owned saving bonds, which makes the bonds more generally held than other government securities, savings accounts, or demand deposits.¹ To make E bonds as attractive as possible and thereby induce greater holdings, the Treasury has guaranteed to redeem the bonds (sixty days after issuance) on demand and at no loss of principal. Thus they are riskless assets. It is this feature of E bonds which makes them similar to money and defeats the anti-inflation function of E bond sales.

E bonds are money if money is defined as those things which have a given price in terms of the accounting unit. Such a definition makes all riskless assets money. From this point of view, the quantity of

¹ Cf. "Liquid Assets and Expenditure Plans of Farm Operators," *Federal Reserve Bulletin*, September, 1946, p. 965. The complete study of liquid asset holdings appears in the June, July, August (1946) issues of the *Bulletin*.

money in the hands of the public consists of currency, demand deposits, savings and time deposits, E bonds, and that portion of the remaining government debt which is held outside the Treasury and the banking system and which the public regards as having a given price. Thus conceived, money consists of what is ordinarily called "liquid assets." According to Federal Reserve estimates, the quantity of these money-like assets not held by governments and financial organizations amounted to 222.5 billion dollars on June 20, 1946.² Of the estimated 152 billions of personal holdings of such assets, the 30 billions of outstanding E bonds amounts to approximately 20 per cent, clearly a sizable part of individual ownership of riskless assets.

E bonds are not, to be sure, spendable as such, and their deficiency in this regard is, by some definitions, sufficient cause to exclude them from the money category. Although I have no serious quarrel with the use of the spendability test as the dividing line between money and other things, even with such a definition, E bonds are in fact perfect substitutes for a large part of the outstanding supplies of spendable money (demand deposits and currency). Much spendable money is earmarked by its holders for contingency purposes or as speculation on a fall in prices, including the prices of risky assets such as industrial shares. For the financially conservative who prefer to hold a large part of their assets in riskless form, E bonds are at least as good as demand deposits or currency, and in addition they yield a return. Furthermore, the redemption of E bonds automatically calls forth the kind of and corresponding amount of spendable money which bond redeemers wish to obtain. When bonds are cashed, the Treasury must, on this account, either let its cash balance fall or create additional cash by sale of debt to the banking system or both. Because the Treasury has bound itself contractually to provide this automatic conversion between E bonds and spendable money, ownership of E bonds provides the same free choice to make expenditures as equivalent holdings of demand deposits and currency. E bonds might therefore be properly treated as a part of the money supply even though they are not spendable as such.

Additional evidence of the money-like character of E bonds and their ineffectiveness as an anti-inflation weapon is provided by E bond redemptions. For the eight months following January, 1946, total redemptions have amounted to 3,741 million dollars, which is a monthly rate of 467 millions and a yearly rate of 5,611 millions.³ Thus yearly redemptions are roughly the size of prewar United States Government deficits when deficit financing was a major part of an antidepression program. Current redemptions are, in all probability, a minimum meas-

² *Federal Reserve Bulletin*, November, 1946, p. 1237.

³ *Treasury Bulletin*, November, 1946, p. 35.

ure of the inflationary effects of the presence of E bonds in terms of expenditures upon consumption items and durables. Now that E bonds are no longer purchased to prove one's patriotic zeal, redemptions are not largely offset by new bond purchases by the same persons. There is a strong presumption that almost all of the cash obtained by these redemptions becomes a part of the active money supply. The impact of this cash appears to be concentrated initially in the markets for durables such as cars, real estate, and farm equipment. Expenditures for these items arising from E bond redemptions add to excess demands from current cash receipts and idle balances and create a setting in which sellers can increase prices with impunity.

To a smaller extent, the redemption of E bonds is a factor increasing the demand for consumption services and nondurables. The bonds act as a contingency reserve. Even in times of full employment, strikes occur, jobs are permanently lost, and some farmers suffer losses. Those who own E bonds or other riskless assets have a cushion which permits consumption expenditures to be maintained at levels higher than would otherwise be possible. Coupled with the inflationary inclinations of a considerable part of the public, including business organizations, the contingency function of E bonds provides the basis for a larger aggregate inflationary result than would be likely if people were holding tax receipts, for example, instead of government debt. These considerations suggest that E bonds have played an important role in aggravating the inflationary pressures since V-J Day and may continue to do so for some time.

Demand liabilities in the form of government debt, such as E bonds, allow their holders to make expenditures without having to induce others to give up money. There is, in other words, a wide range of freedom in which the millions holding debt can determine how much inflation the economy experiences and at what rate. If insufficient expenditures were our main monetary problem, the presence of these large quantities of riskless assets would be a blessing. But in that case there would be little justification for paying interest. It seems to me that government debt should be so constituted that it maximizes the power of the responsible administrative authorities to exercise intelligent direction of monetary affairs. Laissez faire as a monetary policy should have died long ago. No one can foresee what specific monetary policies will be needed in the future. It is not safe to assume, as many have, that chronic deficiency in aggregate demands for output will be our long-run problem. We can be reasonably confident that the United States economic system will continue to be subject to instability and should prepare accordingly. At present, the huge amounts of riskless assets in the hands of individuals and businesses and banks leave the control of money to private decision. Theoretically, com-

pensatory fiscal action could nullify inflationary pressure, but this requires political action too unpopular to be dependable.

A stride in the direction of greater control is to eliminate E bonds and similar securities by offering nondemand liabilities in their place. It is not suggested that the Treasury should renege on its contract with holders of E bonds or other government debt. Rather, securities should be offered which the public will prefer to E bonds and which they will buy and hold instead of buying output. Perpetual securities without price support are a possibility, but I doubt if they would be sufficiently attractive in the present setting except at a much higher interest rate than now prevails on long-term Treasury bonds. The introduction of marketable securities yielding a high rate would severely unsettle the remaining portion of the debt, and the repercussions upon financial institutions might make the remedy worse than the cure. A superior debt instrument, but one involving a greater departure from standard debt forms, would be a noncashable annuity with the income adjusted wholly or in part for changes in the cost of living. This type of protection is not now provided privately and is not likely to be as long as insurance companies continue to concentrate their assets in government debt. The desire for income protection in advanced years is a powerful one, and it is likely that many holders of E bonds and idle cash would be willing to forego short-run protection for the longer-run protection of such annuities. As a counter-inflationary device, annuities would be much more effective than cash-like debt, since after people acquired this Treasury obligation, they could not use it as a basis for expenditure. In times of depression, on the other hand, the Treasury could permit holders of annuities to cash them as a temporary privilege and thereby give the securities the characteristics of cash when an expansion policy is needed. No such flexibility is possible with the debt instruments now used by the Treasury.

The interest cost of annuities would be greater in all likelihood than present interest charges, and this is a possible objection to changing to the issuance of debt instruments which are unlike money. But under present practices, the interest payments of the Treasury are providing little or no social gains in return. People who prefer riskless assets regardless of yield are now paid interest to hold E bonds when, without this security to acquire, they would hold spendable money instead. E bond owners are not likely to forego purchasing new cars or houses because of the interest lost by cashing the bonds. If the cost of placing less money-like assets in the hands of the public is higher interest charges, the gain is the greater opportunity for the Treasury to apply economic intelligence to public ends.

INTERNATIONAL VERSUS DOMESTIC MONEY

By ROBERT TRIFFIN
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The topic of this paper, and its brevity, invite commonplaces. The most trite of such commonplaces is the once original observation that the gold standard was in essence an international monetary system, and that its breakdown in the interwar period represented the triumph of monetary nationalism over monetary internationalism.

Since your Chairman begged for originality in these papers, I shall try to defend exactly the opposite thesis. Paradoxical as it may sound, I submit to you that the general abandonment of the gold standard in the thirties was a reaction, not against international monetary organization, but against the lack of any such organization. I also suggest that an international monetary system cannot be approached by renunciation of national instruments of monetary policy, but implies, on the contrary, the strengthening of such instruments and their effective utilization and integration into an international policy framework. In other words, monetary internationalism must begin in the sphere of ends and policies rather than of means and techniques.

The automatism of the gold standard excluded any control, whether national or international, over monetary phenomena. It precluded, therefore, the development of an international monetary policy, by denying the means of carrying out any such policy. This *laissez faire* attitude was defended, here as in other areas of economic life, as the sure path to economic balance and equilibrium. It is curious to reflect on the survival of this philosophy in the field of international relations, long after its abandonment by most economists in the field of domestic economic policies.

The prestige of the gold standard as a mechanism ensuring international monetary balance can be traced back to the classical analysis of balance-of-payments readjustments. This analysis, however, was developed in terms of a special category of disequilibria, originating in cost maladjustments between a single country and the rest of the world. It was never intended to apply to world-wide disequilibria associated with the phases of the international business cycle. The classical analysis, moreover, was greatly distorted in the twenties by the famous "rules of the game" school of monetary and central banking advisers.¹

¹ I cannot elaborate or substantiate these statements here, and must refer the reader to my forthcoming paper, "National Central Banking and the International Economy" in *The United States in World Trade and Finance* (No. 7 of the series "Postwar Economic Studies," Board of Governors of the Federal Reserve System).

In the case of cyclical world-wide disturbances in balance of payments, the result of both the gold standard automatism and the "rules of the game" policies was to ensure the propagation of the cycle from the centers of cyclical disturbances to outlying geographical areas. In doing so, they accentuated rather than corrected the intensity of cyclical fluctuations the world over.

Facts proved stronger than theories and most nations finally threw orthodoxy to the winds, and embarked instead upon compensatory monetary policies, behind the protective wall of currency devaluation and of exchange or trade controls. These measures, hastily devised, and with purely nationalistic objectives and criteria of administration, were often internationally harmful and mutually self-defeating. They have, however, enriched the apparatus through which monetary policy can be made effective. The situation calls for exorcism rather than for excommunication. The new weapons should not be scrapped indiscriminately—an objective on which general agreement would, anyway, be impossible—but harmonized and integrated, through international consultation, into the implementation of internationally defined monetary objectives. This would increase their national effectiveness, as well as ensure their international usefulness.

Progress along this path will be made incomparably easier by the creation of the International Monetary Fund. The Fund quotas will decrease the need for, and offer an alternative to, national restrictions on exchange transactions. The quotas, however, may be insufficient to maintain free and stable exchange in cases of acute disequilibria in the balances of payments. In this case, international consultation will help select the measures most appropriate to the situation. Fundamental disequilibria cannot be corrected through exchange control measures, but call for lasting measures of readjustment, one of which may be a modification of the currency's par value. On the other hand, changes in parity would generally be inadvisable as a remedy for temporary disequilibria, since they would actually disturb the international balance of prices and costs, once the temporary factors have ceased to act. As a measure of last resort, nondiscriminatory controls may then prove the lesser evil, from the international as well as from the domestic viewpoint.

The task of the Fund will precisely be to examine these and other alternatives in order to reach agreement, in each concrete case, as to the most suitable policies, the extent to which action must go, and the ways to minimize harmful effects on other countries. The Fund's philosophy should not be frozen, especially at this early stage, into the rigid, ready-made formulas which have so often contributed to the sterility of previous efforts at international economic collaboration.

and organization. The infinite diversity of regional and other conditions which shape up a country's problem should be fully recognized. On the other hand, the imposition of exchange controls, changes in parity and other similar measures deeply affect the economy of other countries and are of vital concern to the international community as well as to the particular country which seeks their adoption. International monetary order cannot be achieved by a return to gold standard ideals of international laissez faire. It implies positive action and policy, but, as distinct from the thirties, through international co-operation rather than through international anarchy.

MONEY AS NUMÉRAIRE

By WALTER P. EGLE
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The following discussion of money as *numéraire* or, to use a more familiar term, unit of account, concerns itself entirely with the problem of over-all economic stabilization. The would-be stabilized economy is meant to be an essentially private enterprise type of economy. This excludes not only a system of state-owned and controlled enterprise but also a system of rigorous governmental planning involving retention of private ownership with a more or less complete shift of control over the use of resources from individuals to central government. In organizations of this kind the achievement of stability is compatible with monetary conditions and monetary policies which would preclude stability of employment or activity under the assumption of private enterprise. It does not exclude, however, the use of government as a flexible balance wheel, exemplified, in particular, by countercyclically varying—compensatory—budgetary operations. Even if such fiscal stabilizing policy is primarily operated on the side of expenditures and not so much in terms of variable taxes, the economy can be said to conform, by and large, to the notion of a system of private enterprise. But no objections are raised here against calling this type of arrangement a “mixed” or “dual” economy, provided it is understood that the government merely adjusts its budgetary operations to actual or anticipated fluctuations of private investment and privately generated income. In this sense, compensatory fiscal policy is merely a development from central banking methods of over-all control; i.e., a development sponsored by those experts on stabilization who are skeptical with respect to the effectiveness of central-banking instruments of control of total effective demand.

The problem of stagnation, and hence of governmental policy designed to compensate for chronic underemployment, will be ignored. So will the proposal for full employment—in favor of the proposal to adopt the mean level of booms and slumps as the objective of stabilizing procedure. Both the assumption of chronic underemployment (for reasons other than monopolistic forces, i.e., forces which presumably are controllable within the framework of private enterprise) and the pursuit of an employment objective which capitalism has never been able to achieve consistently and lastingly, account for perpetual expansive activity of the state, and, therefore, for a gradual but inevitable transition of our economy toward a system of state-owned enterprise.¹

¹ I am not referring to the proposal for a “transitional” program of public works programs designed to help breaking private monopolies (driving a wedge of public enterprise into

Among the members of the profession who devote themselves to the problem of stabilization for an economy of this type there exists a strong predilection for stable money. In one version, stabilizing procedure is not to go beyond the achievement of stable money, in terms of a stable level of prices. Here the elimination of price level fluctuations stands for the entire over-all stabilizing program. It is contended that stable money will secure stability of total employment and total effective demand and that it is neither necessary nor legitimate (i.e., from the standpoint of libertarian, individualistic, economic philosophy) to adopt stable employment as a direct objective of governmental economic policy. The achievement of stable money is to go hand in hand with a vigorous program of establishing competitively flexible prices. The latter program is to serve two purposes: first, to make private industry gradually absorb "structural" unemployment, and, secondly, to establish a level of prices which is highly sensitive to fluctuations in total effective demand, so that the price level may become a prompt announcer of trouble. Ability of prices in general to change in accordance with fluctuations in total outlay is not desired for the purpose of making the community rely on price-flexibility as a *restorer* of over-all stability. Rather it is desired for the sake of establishing the price level as a promptly operating *guide* for stabilizing action.

Behind this, of course, stands the conviction that unstable money, or unstable expectations with respect to prices in general, are the chief, if not the only, cause of business fluctuations. To eliminate from price expectations the monetary element of uncertainty (leaving room only for relative price changes in accordance with shifts in demand)² it is said to be necessary to establish, in the public's mind, lasting confidence that fluctuations in the general scale of prices will under no circumstances be allowed to occur. This involves a governmental guarantee of stable prices, meaning demonstrated ability and responsibility on the part of the government (the logical agency in charge of monetary policy) to vigorously counteract whatever incipient price inflation or deflation may occur. If I am not mistaken, the stable-money school would reject the argument that in the past we have had

monopolistic industries). This proposal really belongs to the category of measures which aim at the achievement of full employment via the enforcement of a competitive price system; i.e., the "classical" approach to full employment. Proponents of this method, like Professor Ellis, are not afraid of more than purely temporary (countercyclical) deficit financing, provided public loan expenditures for governmental investment are directed into channels which promise the proper results from the standpoint of the ideal of competition.

² Or costs of production, in connection with technological progress. Strictly speaking, the stable money school is merely asking for predictability of the value of money. It could therefore make allowance for a gradually falling price level of goods and services in conjunction with technological progress, provided there were some regularity about the rate of progress and its effects on the price level.

periods of fairly stable money without having managed to get rid of cycles, presumably for the reason that such stability of the value of money was merely a historical accident, or the result of no more than a "policy." In other words, the past would prove nothing for an arrangement according to which the achievement of stable money is to become a matter of an unconditional and absolute "must." Vigorous efforts of the authority in charge of monetary policy, throughout a transitional period of indeterminate length, would eventually lead to firm public confidence in the stability of our money, and thus lead to stable price expectations. The implementation of such guarantee is not always the same. According to some members of this school, the guarantee is to be given in the form of an automatic multiple commodity standard (commodity reserve currency proposal), according to which the government is to buy or sell a certain aggregate of basic raw material at a fixed (average) currency price. According to others, the guarantee is to be furnished in the form of a mandatory price level stability rule, implemented by variable taxation. Despite their different appearances the two types of proposals are in fact very closely related to each other. They are both examples of the design of automatic compensatory monetary devices, one presented in the traditional form of an automatic commodity standard, and the other in the less familiar form of what may be called "automatic management" (the monetary agency would be held to mechanically increase or decrease the stock of money in accordance with an incipient fall or rise of the price level).

These ventures are subject to a great deal of doubt, both theoretically and from the standpoint of policy making. The theoretical doubts center around the contention that money is the exclusive cause of cyclical instability; i.e., that we must discard all theories of the cycle which operate with such potential causes as, for example, a wave-like character of technological progress, or of business psychology, or of crops, etc. From the standpoint of policy, one cannot help being impressed by the tremendous political and administrative difficulties of reform designed to establish a crowd of competitors in all industries and to secure a price system sufficiently sensitive to fluctuations in total effective demand in order to install the price level as a promptly working guide for stabilizing operations. The proponents of these schemes appear to be aware of these difficulties and, in an air of realism, suggest that the stable-money approach could be carried into effect prior to the establishment of a competitively flexible price system, through the selection of prices of commodities which refer to industries now working under competitive conditions. In this sense, it has been frequently suggested that the community should select an aggregate

of raw-material prices for purposes of index making. This proposal raises doubts on several scores. In the first place, the process of narrowing the choice of prices involves the danger that the constructed index loses the quality of a truly representative measure of the value of money. A raw-material price index may have some bearing on the ideas which producers form with respect to the behavior of the value of money, but it would have little significance as regards the large masses of consumers and wage earners.

From this viewpoint it is probably sound to argue that an average of prices which is to be meaningful as a measure of changes in the value of money, should comprise a large number of prices of consumers goods and personal services. But, perhaps, there exists no average of prices which is, *par excellence*, the measure of the value of money, so that some economists have a point when they argue that the choice of index numbers depends largely on what we wish to stabilize. For example, if we wish to prevent violent changes in inventory policy, it may be meaningful to stabilize an average of raw-material prices, although it would be certainly daring to claim that conspicuous shifts from inventories into money, and vice versa, are caused by nothing but unstable price expectations with respect to raw materials. In fact, if we decided to stabilize rigorously some raw-material index, in the expectation that this measure would give us over-all stability of the economy, we would most likely be sadly disappointed unless we had resorted, at the same time, to stabilizing machinery in other respects.

Secondly, those who would pick out a selective index of raw materials are confronted with the difficulty that the movements of such an index, in a world of otherwise rigid or sticky prices, cannot be expected to be truly indicative of fluctuations in total effective demand and employment. As I see it, there are two different theories concerning the behavior of the scale of competitively flexible prices vis-à-vis an important sector of monopolistically rigid prices, or rigidities due to nonprice competition. One is that the instability of the competitively flexible prices is exaggerated by the coexistence of rigid prices, with the effect that the changes in the scale of flexible prices cease to be a true measure of changes in total outlay or employment. The other theory is that the level of flexible prices is, so to speak, protected by the rigid ones, in the sense that rigidity in the prices of major commodities or factors serve to prevent cumulative monetary processes; i.e., violent and bottomless deflationary or inflationary spirals. The last word on these two theories has not yet been spoken, but it seems to me that they are not necessarily incompatible. For example, it is quite possible to argue that in times of shrinking total outlay monopolists and industries given to nonprice competition will "squeeze" the

competitive sectors of the economy (through sacrificing output and employment to selling price, and otherwise), and yet at the same time to claim a certain capacity of major rigid factor and commodity prices to check a deflationary spiral, so that in the end the level of flexible prices may not come to move downwards as fast and as far as it might if all prices of commodities and factors were immediately adjustable to a shrinkage in total effective demand. But be that as it may, it is *prima facie* unlikely that the scale of competitively flexible prices, flanked by rigid prices, will behave as it would under the condition of generally flexible prices.

Given the various types of price rigidities, a general and more nearly representative price average, made up of consumers goods, services, producers goods, etc., would fail to satisfy as a guide for stabilizing action, even if the methods designed to stabilize such a price index would proceed through channels which could not help but touch employment and, generally speaking, cause the issue of stable money versus stable employment to be no more than a quibbling over words. If, for example, such an average would fail to register fluctuations in total employment amounting to from 5 to 8 million workers, it would be a decidedly slow guide. Compensatory action might be too late and too little.

Of course, some allowance for implicit price changes in connection with nonprice competition could be made as far as indexes are concerned. That is to say, the habit of producers to push the sale of luxury brands at the expense of low-priced brands (of essentially the same substantive quality as the luxury brands) in times of expanded monetary demand could be registered by making corresponding changes in the weighting of the index. In the same sense, an allowance could be made for a lowering of quantity per unit of branded commodity. Analogous revisions of the index could be made in times of contracting total demand when, presumably, producers tend to switch from luxury to low-priced brands. This way the index could be made to tell the public more nearly and precisely what was happening to the value of money. But a strong argument can be made to the effect that the public would fail to be impressed by this type of changes in the money value, at least not as much as if prices "actually" changed. In other words, it is doubtful whether changes in the value of money of this kind cause that sort of instability of price expectations which is impressed upon the student of this school as the major cause of business cycles.

All this does not mean that efforts to stabilize the value of money and thus to arrive at a reliable and predictable quality of money as a unit of account are misplaced from the standpoint of the general aim

to get rid of violent business fluctuations. On the contrary, notwithstanding the recent revival of the proposal to implement full employment policy through an inflationary lowering of real wages (Keynes), the profession, after disposing of this notion, has made an impressive stand on the desirability of a stable money value. As Professor Hart suggests, "measures proposed to support employment are largely of such a character as to put upward pressure on price levels. Measures designed to thwart an upward drift of prices are likely to be of such a character as to increase unemployment. Neither the objective of full employment nor the objective of price level stability, consequently, can be pursued with complete single-mindedness."³ Consequently, the frequent assertions among current stabilization experts that violent fluctuations in the money value must be avoided can only proceed at the expense of ambitious definitions of full employment or else they are not sincere. The desirability of stable money, however, is argued for more reasons than the concern about the destabilizing influence of uncertainty as to the money value. Those imbued with the need for continuous and heavy fiscal compensatory operations favor price level stability primarily for the reason that intelligent anticipatory (preventive) budgetary policy strongly suggests reliance on a stable money value. Those who think in terms of a quasi-self-sustaining equilibrium and who associate this state of affairs with a high-consumption economy, favor stable money as protection against the danger that governmental encouragement or sanction of aggressive wage policy (as a means toward lifting the consumption function) may be spoiled by price inflation; i.e., fall of real wages.

How much these "administrative" reasons count—in the eyes of those who are motivated by them—in comparison with the individualistic or, shall we say, capitalistic element of unstable expectations, is difficult to say. There is of course interaction between these elements. If the employment objective is chosen wisely, i.e., at such a level that we do not need to face inflationary pressures, and if, consequently, the public begins to acquire confidence in the stability of our money value, then the practical significance of the neoclassical concern about rapid changes of liquidity preference is clearly diminished. On the other hand, the prevalence of confidence among management, labor, and consumers that the value of the money-unit will be stable is likely to diminish the burden which rests upon the stabilizing authority. To say that, after a transitional period of most energetic stabilizing operations, the operative burden of the agency will be lessened, does not amount to the notion that effective stabilizing procedure will eventually become

³ Albert G. Hart, "The Problem of 'Full Employment': Facts, Issues, and Policies," *American Economic Review*, May, 1946, p. 280.

fully "self-enforcing." I have no confidence in the proposition that eventually the stabilizing agency can afford to be "neutral." Nevertheless, it is quite true that stabilizing efforts, if they are to proceed without leading to an overgrowth of government, must eventually succeed in establishing public confidence and co-operation. Such confidence will express itself in terms of a steadier flow of private investment and consumers' outlay.

SUMMARY AND COMMENTS

By HOWARD S. ELLIS
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It may be profitable to bring into strong relief some main lines of agreement and disagreement in the foregoing papers. No one will have missed the ground common to Lerner and Graham, and the similarity in the views of Simmons and Rolph. Lerner and Graham take almost diametrically opposed points of departure in nominalist and commodity theories of money respectively, but they share a considerable faith in contracyclical monetary policy; neither, however, regards the supply of money in isolation as the key point; but both would envisage large-scale stabilizing operations by the monetary authority in the markets of staple or standard commodities. With Graham these commodities would be more or less prescribed in advance and tied up with a specific price index which is to be stabilized, whereas Lerner would probably leave the stabilizing operations to administrative discretion.

Simmons and Rolph have in common a concern for the revitalizing of monetary control through a sharper separation in actual practice between money and other things. Simmons gives an answer to the question once asked by Samuelson as to why the 2 per cent war might not as well have been a 1 per cent war;¹ namely that "2 per cent was possibly too high a price to pay to get people to give up money for securities which are only slightly less liquid than money." And the cost of this extravagance—giving too much liquidity for the price—Rolph points out in the present redemption rate of series E bonds, which embodies the inflationary effect of these securities upon consumers goods. Simmons does not go extensively into the problem of present measures to put the supply of dollars under effective control, but he does say trenchantly that only a central bank can create liquidity. As a move in the direction of making the public dependent upon the liquidity created by the central bank, Rolph suggests that the Treasury sell noncashable annuities with future income adjusted to changes in the cost of living. Incidentally, no one in the present panel has explicitly championed the proposal that commercial banks be required to hold reserves of low-yield Treasury certificates. And no one has echoed the idea that the "changing character of money" lies in a tendency to shift monetary policy from regulating quantity to prescribing the ways in which money can be used.

There seems to be virtual unanimity, however, on a number of

¹ Paul Samuelson, "The Effect of Interest-Rate Increases on the Banking System," *American Economic Review*, March, 1945, pp. 16-28.

important points. Everyone would agree with the sentiment, dramatically phrased by Rolph, that "*laissez faire* as a monetary policy should have died long ago." So far as any expressions were forthcoming, stability of prices is accepted as a factor contributing to general economic stability. Egle quite properly sounds a warning that price-level stability is not an end in itself, but only a means toward the more important goals of stable national income and employment. He seems also to feel that umbrage is sometimes unjustly cast upon this aim by giving it a completely absolute form. One might quite reasonably attach great importance to avoiding large swings in prices and still hold that a mild advance of prices could be beneficial in major transitions, such as launching or terminating a war economy, or pursuing full employment policies even "normally." Niebyl's paper breathes a fervent resentment of the arbitrary dislocations of wealth and income produced by inflation, and implies a reasonably stable pricing unit as an instrument of social justice.

In passing I may perhaps be permitted to express my disagreement with Egle's reconciliation between those who believe that rigid prices and those who believe that flexible prices contribute to economic stability. The rigid price sector may conceivably cause a price index to decline more slowly in depression than if the administered price sector were more flexible; but this supposed gain is illusory because this relative inflexibility of prices downward is purchased at the cost of contracting employment and output. This seems to reverse means and end, and to give price stability precedence over production. In my own judgment the stable versus flexible issue is rarely joined correctly. What the proponents of flexible prices want, or ought to want, is not more general deflation in a depression, but rather more flexibility of prices within the price system relatively to one another always, which comes pretty much to wanting to lessen monopoly restriction of output and employment. And what the proponents of stable prices want, or ought to want, is not more monopoly and unemployment, but the avoidance of general deflation. Both aims are thoroughly compatible: a reduction of the power of monopoly elements in the system and monetary and fiscal policy oriented toward price and income stability. Indeed, they are highly complementary goals. If I do not err, a similar conviction is reflected in Niebyl's remarks.

But to progress to other points of agreement. Purely monetary devices are generally esteemed to be inadequate, though control over the quantity of money is always assigned a role. Rolph and Simmons emphasize the debt structure as impinging intimately on monetary control. Simmons points to the futility of merely trying in a period of slack to "build a fire under money" by taxing balances, etc.; remedial meas-

ures must reach down into the fundamental causes of uncertainty, which is after all the reason why people hoard. Amongst factors reducing uncertainty, Egle would give weight to a conviction on the part of the public that government meant firmly to pursue a high level employment policy. I have already mentioned stabilizing operations on commodity markets by the state, advocated here in differing forms by Graham and Lerner, and elsewhere in still different forms by Copeland and Ezekiel. Lerner would go much further, in assuring monetary control by government control of wage rates and markup margins, a proposal which raises the perennial question as to whether full employment is achievable without virtual state socialism.

The papers in the present session emphasize the changing character of money in the one really important sense of "character," which is how we regard the entity. If it were necessary to compress this changing character of money into a single sentence, it would be that the economist comes more and more to associate money inextricably with the society in which it functions. The time-honored conclusion of monetary theory favorable to a stable value unit has been accorded a high place in the present discussions; but no one imagines this end amenable to rigorously "pure" monetary management. Intimately associated with monetary control is the management of the debt; and fiscal policy is almost indissolubly associated with monetary control. Back of these are the basic structural problems of our society: instability, immobility of resources, inequality of opportunity, and monopoly. It is impossible to conceive any really basic "monetary" reform which would not involve progress in these fundamental matters, not only within a single country, but also, as Triffin has emphasized, in the international scene. Perhaps monetary theory will have reached its highest advancement when its content has come to be so intimately associated with "the economy as a whole" that it disappears as a separate discipline.

THE ROLE OF SOCIAL SECURITY IN
A STABLE PROSPERITY
SOCIAL SECURITY IN AN UNSTABLE WORLD

By LEWIS MERIAM
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This paper will be centered on two major theses:

1. The formal social security system is a minor factor in the quest for economic stability.
2. The utility of a social security system such as that toward which we are tending is dubious unless economic stability is attained.

Those of us who have lived through two world wars scarcely need be reminded of what wars do to economic stability. The victorious nations emerge to face situations which from the standpoint of what ought to be done and how it should be done are more difficult than war itself. Political divisions among the victorious allies and among the people of a single victorious nation are broadened and intensified and lead to bitter controversies. As to the vanquished, many of us will recall our studies of the social security legislation of Germany prior to the first World War and possibly our admiration for the efficiency that country had attained in the administration of government. The example of Germany today does not greatly advance the cause of those who would have the United States follow the policies adopted in Western Europe.

Never before has it seemed so clear that the social security of any major nation depends upon its productive capacity. To protect its people in an uncertain world it must be in the forefront of technological advance and productive efficiency. Few, I believe, would question the assertion that the final outcome of the second World War was in large measure determined by the productive efficiency of the United States. Under the free enterprise system the country had developed what was popularly termed "the know-how." The extensive development of capital resulted in great output per man-hour. Despite the goods and services poured into the war effort the people of the United States still maintained a level of living far superior to that which many other countries had had even in years of peace. Shortages existed to be sure, but they were shortages of what in most other countries were luxury goods.

Productive efficiency must be emphasized as the main source of social security, because in the thirties an opinion was widely held and disseminated that the United States had solved its problems of production and that its major difficulties were distributive. That view was in

part isolationist, based on concepts of a largely closed national economy. Of the many widely accepted views of that day I shall mention three—the passage of the frontier, the diminished need for capital, and surplus manpower.

Today a widely accepted view is that preservation of social security from its chief destroyer depends upon improving the productive efficiency of the world and more particularly of war devastated and industrially retarded nations. Mechanization and improvement of agriculture should be specifically mentioned as it sets labor free for the development of other industries. If this goal of greatly increased productive efficiency is to be achieved, the United States has new economic frontiers, a tremendous demand for capital, and a shortage rather than a surplus of manpower. If the nation is to have the social security afforded by reasonably full employment for long working weeks, a great demand for its capital goods, and the high level of living possible under such conditions, it must accept in payment for its efforts goods and services from abroad. Social security will thus be advanced in three ways: by maintaining the productive efficiency of the United States, by lessening international unrest and discontent, and by maintaining a close approach to full employment.

Thus with the world situation what it is today it seems to me that the formal social security system that a nation may adopt is a distinctly minor factor in the quest for economic stability.

The second thesis relates to the utility of social security systems based on principles of insurance and promising fixed money benefits upon the happening of certain contingencies in the future; in the case of old-age insurance the fairly distant future.

It appears self-evident that real social security depends not upon the money income of the beneficiary but upon whether that income will purchase the necessary food, shelter, clothing, and medical care required by the recipient at the prices which prevail when he is on benefit. If an insurance system is to be effective in attaining its objectives, the country must have either a stable price level or a price level that tends to fall insofar as the necessities of life are concerned. If it be assumed that peace and productive efficiency are both maintained then the chief threat to such a system is the upward spiral of wages and prices that is one of the phenomena of a free economy and perhaps of a democratic responsible government.

Several points require emphasis in connection with this particular subject.

Social security benefits and other forms of fixed money income are of major economic and social concern when the recipient is dependent on them for the necessities of life. Dependence arises when he is no

longer a direct earner or when the breadwinner upon whom he has been dependent is no longer an earner. The recipient is then unable to profit from an increase in wages made to offset an increase in prices nor in an increase in prices of foodstuffs and other agricultural products brought about by governmental action in the interests of agricultural producers. If persons dependent on fixed money incomes are not to be harmed by wage increases, those increases must not result in higher prices. In times of scarcity of goods in relation to effective demand, producers and distributors must not take advantage of the opportunity to raise prices. Labor, management, and distributors must accept and practice the principle that the advantages of technological progress are to be distributed through a reduction in price from which all may benefit, including those who are dependent upon a fixed money income.

For what may be termed sales reasons, framers of social insurance systems tend to place the initial costs of social security benefits in substantial measure on employers. In the United States the typical employers' tax is a percentage of the pay of each covered individual, not in excess of a specified maximum. Three points with respect to this tax should be noted: (1) it bears least heavily on those producers who have relatively low labor costs because of their effective use of labor-saving devices; (2) it is a tax on employment; and (3) probably to a very substantial degree it is shifted forward to consumers or backward to labor. In a period of full employment and keen competition for labor it seems reasonable to assume that a substantial part of the employers pay roll tax can be passed along to consumers in the form of higher prices.

An opinion is frequently encountered in the United States that persons who are living entirely on fixed money income, "unearned" as it is loosely called, are fair game. People forget that a substantial number of these people are widows, orphans, disabled persons, or men or women of advanced age. One who has been a resident of Washington for many years and has followed even superficially the development of the federal retirement system since its adoption in 1921 is familiar with the pathetic stories and occasionally with the pathetic figures of retired workers who have to make the money benefits of the early years of the system maintain them at 1946 prices. The vigorous, forceful representatives of the unions of active employees seeking higher pay and better retirement benefits, frequently with the endorsement of the A.F.L. or the C.I.O., present a sharp contrast to the elderly and generally feeble people who, often without endorsement, plead that benefits fixed in the past be raised to restore purchasing power and enable them to live.

Some of you are under retirement plans carried by the Teachers

Insurance and Annuity Association and are familiar with the circulars issued to your organizations. Lowered interest rates, greater expectation of life, and increased prices make the benefits promised under the retirement systems inadequate. Increasing the contributions above the old 10 per cent and deferring the retirement age from sixty-five to sixty-seven are advised. It is not alone the social security beneficiaries whose interests are jeopardized but all those dependent on fixed money income—pensions, annuities, life insurance, and bonds, including the widely held and widely advertized government bonds that are to provide us with protection in our old age.

A new factor has assumed great significance since the depression of the thirties: government responsibility for maintaining prosperity. There is an old adage for those legislators who are largely concerned with their own re-election: "Never vote against an appropriation; never vote for a tax." A modern version might be: "Always vote for inflation; never vote for deflation." It is perhaps possible theoretically to devise a system of governmental management of the economy which will provide shock absorbers snubbing off both the downswings and the upswings. These absorbers, however, are not automatic but are to be operated by political drivers at the controls. Use of controls on the downswing will, I believe, be politically imperative. I fear that except in time of war the drivers will hesitate deliberately to snub off upswings. Pushing that button to check upswings in wages or in the price of agricultural commodities is politically hazardous for the operator.

The financial position of the national government is another major factor that apparently will operate for many years to require meeting any general deflationary trend by action to sustain the national income as expressed in dollars. No attempt will here be made to present figures regarding future demands of the national government for dollars. Certain real liabilities which are not represented adequately in present budgets will, however, be briefly mentioned. The national government has many contingent liabilities from its various guarantees, but it can avoid having to pay on them if it prevents a general decline in price levels. An unprecedentedly high percentage of men and even of women are now war veterans. They are possessed of great power as a pressure group. Even if they practice extreme self-restraint, heavy payments for veterans' benefits are inevitable. Our participation in world affairs will make substantial demands, even if private investors supply the bulk of the loans required for rehabilitation and development of other countries. Not very far away is the year when receipts for old age and survivors taxes will be insufficient to meet current benefit costs and

the government will have to finance the deficiencies. The national government, in my opinion, will never default on its obligations for social security or for any other obligation, but the purchasing power of the money with which it pays may be low.

At the risk of repeating what is well known, I must say something about the financing of social security. The special taxes levied for old-age and survivors insurance have been inadequate to finance that program on anything approaching an actuarial reserve basis. Roughly, the taxes are about one-third of what they should have been from the outset if the system were to operate on an actuarial basis. Hence there is a heavy unrecorded and unfunded debt for old-age and survivors insurance that is not shown on the Treasury books. Within fifty to sixty years benefit payments for old-age and survivors insurance will call for several billion dollars a year—from 3 to 6 billion dollars according to official estimates for the existing system that excludes several classifications, the most important of which are agricultural workers, persons working on their own account, and workers who do not remain in covered employment long enough to attain an insured status.

The reserves of the social insurance systems, the railroad retirement system, and the general civil service retirement system are invested in government obligations. When interest on the obligations has become due the government has deposited more obligations to pay in the future. The money actually paid went in the main for the costs of the war and the preceding depression. I do not wish to appear to criticize the use of these reserves for financing the war effort. I trust I have made it perfectly clear that winning the war was the first essential for social security. Had we lost it all the social insurance systems and all the retirement systems would be mere paper and we might be as Germany is today. The fact remains that the reserves are not governmental assets but governmental liabilities and that future generations will have to supply the money to pay the promised benefits.

The benefit formula adopted for old-age and survivors insurance in the 1939 amendments requires brief comment. It was so designed that persons retiring in the early years of the system received substantial windfall benefits. Only a tiny fraction of the actuarial cost of these benefits would have been paid by the employee concerned or his employer even had Congress permitted the pay roll taxes to advance in accordance with the schedule adopted in the original act. From an actuarial standpoint these windfall benefits were in effect like benefits in respect to past services. The government went heavily in debt to provide these unearned benefits, although the debt was not recorded on its books.

Had these unearned windfall benefits been reserved for persons who were actually in need, the action taken by the government could have been severely criticized on only one major ground. The government reserved this special privilege for a single class—the limited number who were able to obtain an insured status under OASI. It did not make them available to agricultural workers, persons employed on their own account, and thousands who do not remain under OASI long enough to attain an insured status. The windfalls were exclusively for a particular class.

The government, however, did not reserve the windfall benefits to those in need. It went into debt to provide them for all in the specially privileged class without reference to their resources. Persons with annual earnings of over \$3,000 a year received them with respect to their earnings not in excess of \$250 a month. Many persons of very modest means will be taxed to supply these windfall benefits to persons who had no real need of the money. It is true these well-to-do beneficiaries have paid and will pay heavily in other taxes but so will others who have no opportunity to acquire an insured status under OASI and thus no chance to profit from this governmental action. The accrued debt occasioned by these windfall benefits is passed along to the future.

A question which must be asked is whether economists and statisticians can with reasonable accuracy forecast the economic, social, and political conditions that will prevail in the United States at the end of the present century or even in 1975. If they cannot, should the nation establish a compulsory, universal old-age insurance system that will have progressively expanding annual benefits costs which will amount to several billion dollars by about the year 2012 and continue at that rate indefinitely?

When one writes and talks in this way against a popular tide—a popular tide which is based I believe in no small measure on misinformation and inadequate understanding—one is under some obligation to answer the question, "What would you do?"

I should say at the outset that I should not go to the simple, clear-cut, and apparently effective social security devices possible in the totalitarian state and I would resist movement in that direction by gradualism.

One of my reasons for opposing such a course may perhaps be regarded as emotional but I believe emotions of majorities and of minorities are real factors in economics and politics. Both in the government service and in private life I have been so often in a minority that the establishment and protection of individual rights seems to me to be essential to the pursuit of happiness. I have seen too much of government in action to have illusions as to its potentialities for per-

fection. People once wielding the power of government are loath to see it pass into the hands of others. The power they seek so avidly to obtain would be, if exercised by others, a threat to our democratic institutions.

My second reason is, I hope, less emotional. I have stressed the maintenance and development of productive efficiency as the essential assurance of social security. I appreciate that the United States was endowed with great natural resources but I have never been able to attribute to that fact alone its pre-eminence in productive efficiency and in the level of living its people have enjoyed. It has presented and continues to present great opportunities for individual initiative. Thousands of its citizens have attained leadership in its diversified activities through methods other than political party membership and political manipulations. The existence of these leaders and others qualified for leadership permitted the prompt and successful conversion of our productive resources and our way of life from peace to war.

Among students of organization and management there is general agreement on one point. In large enterprises if the power to make decisions is retained at the top of the hierarchy and is not delegated down the line, productive efficiency is greatly impaired. Precious time is lost as reports and recommendations move slowly up the line and decisions move slowly down. Unfortunately in a government service many forces operate to influence top officials to retain decision making, since even minor decisions may have political repercussions. Some writers on American governmental administration attribute this tendency to the fact that our top administrators are answerable to Congress and the public and must protect themselves from mistakes by subordinates. Even a molehill mistake may become a mountain when a Congressional committee gets hold of it. But acquaintances who have had close dealings with the Russians tell me that decision making there is concentrated at the top to a far greater degree than in either the United States or Britain. The penalties for an unapproved decision are so severe that few dare to take any action not specifically authorized from above.

In the United States Government it is frequently true that the higher a case goes up the hierarchy, the less the detailed knowledge of the facts and their implications and the technology; and the greater the possibility that the decisions will be arrived at on the basis of momentary political expediency. In thousands of cases the immediate decision of a foreman on the job would be at least as good as the one the administrator would make in Washington days or even weeks later and it would get the work done faster.

Under our American system of free enterprise we have had decen-

tralization of power and authority, large opportunity for initiative and decision making, and great incentive to get the job done and make a profit. The penalty has been a loss. Under our federal form of government our states and local governments have permitted a wide distribution of decision making. It has not yet been demonstrated that any other system can attain so high a level of productive efficiency and technological advance.

Holding this point of view I would preserve for the American citizen the maximum possible opportunity to venture with his time, his talents, and his earnings. I would not compel him to put so much of his earnings into social insurance systems either through direct contributions or indirect taxes that he has little in the way of stakes for risk-taking. If the United States is to preserve its leadership, it must give full opportunity to the uncommon man who above his fellows possesses talents or inspiration. These are the people who advance civilization. Money spent in giving opportunity for talent to demonstrate itself and to develop means more for the social security of the nation than money spent to protect an individual from the humiliation of a means test.

I am well aware that we have, as every country has, a substantial number of persons who are unfortunate. They may be underendowed mentally or physically. They may have in some way been underprivileged and not been able to take advantage of the opportunities commonly open to American youth. They may have been reared in communities where opportunities were not available to them. Death or disability of a parent may have cut them off from the distributive system and left them without provision. Accidents or disease may have robbed them of earning power. The downswing of the economic cycle may have subjected them to unemployment through no fault of their own. Old age may have found them without resources for maintenance. Their sense of values and of their obligation to dependents and to society may have been such that they dissipated their talents. Whatever the cause, they are people in need.

To those who are in need according to a reasonable and well-defined standard of need I would give from public funds sufficient money to relieve that need in accordance with the prevailing price level. Among the several functions of government that must be financed from public funds I would give relief of need a high priority, although not a first priority. I should design a system that made reasonably certain the appropriation of the necessary funds and that distributed them with dispatch and accuracy. The means test would be so designed that the facts necessary to apply it would be obtained so far as possible by im-

personal, objective, and nondiscriminatory methods, but inquiries to verify the facts would probably have to be directed to the individuals concerned and to others in the community. In those cases in which public services could be rendered that would restore economic efficiency or develop it, I believe they should be rendered and acceptance of them should be largely compulsory, especially where children are concerned or where the need arises from what are commonly called bad habits or disinclination to work.

I would not go so far as the Russians have apparently gone in making work compulsory at any task assigned the individual by the state for such wages and under such conditions as the state may prescribe. I should continue our present practice of reserving that treatment for inmates of penal institutions. I would say in effect to the persons of working age: "So long as you support yourself and those dependent upon you by your own efforts and resources, you are free to do as you please within the law and work or not as you see fit. If for any reason it becomes necessary for you to draw support from public funds, you will be expected to comply with the conditions that govern the granting of public funds."

I would develop credit devices to assist persons who have been following the American practice of acquiring private property and are caught by the disasters which are embraced within the field of social insurance.

Time does not permit of an elaboration of this subject but I would seek to modify the rigidity of many such contracts, and where private financial institutions cannot take the risk I would have the government assume it if such action will tide the individual or his family over the crisis and insofar as possible restore the persons involved to economic and social efficiency.

To summarize, real social security depends upon the preservation of peace, which in turn depends in part upon the maintenance and development of high productive efficiency. The utility of elaborate formal systems of social security promising fixed money benefits payable in the distant future depends upon the capacity to obtain either stable prices or falling prices since the upward spiral of wages and prices impairs the purchasing power of fixed money benefits. The world is too uncertain to permit of forecasting the future with any degree of assurance. If the totalitarian state is rejected as the desirable economic and social system and if the approach toward it through gradualism is to be avoided, then a course consistent with free enterprise should be adopted. This course would appear to be to establish a floor below which no person would be permitted to fall without becoming im-

mediately eligible for assistance from the public treasury paid certainly and promptly. Persons who can maintain themselves and those dependent upon them at or above the floor should be left free to pursue happiness in their own way provided they stay within the law. The government should not go further in redistributing income than is requisite in performing essential public services. Relief of need is one of the essential public services entitled to a high priority in the allocation of revenues.

FINANCING SOCIAL SECURITY

By ELIOT J. SWAN

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The role of social security in stable prosperity depends upon coverage, benefits, conditions of eligibility, and upon the way the system is financed. It is the last point with which this paper is primarily concerned. The degree of protection afforded the individual and his family is of utmost importance. Is the social security program sufficiently comprehensive and are benefits adequate to express the desire and responsibility of society to provide for those who, for reasons beyond their control, are temporarily or permanently nonproducers? The collection and disbursement of funds involved affect the size of the total income flow as well as its distribution, however. Hence a second problem also must be faced. Is the program financed in such a way that production and employment are encouraged as much as possible? A properly financed system cannot only protect the individual, it can make a positive contribution to high and stable aggregate employment and production. This means that the financing of social security should be in accord with a general fiscal policy directed to the same end. This has not been true of existing programs.

Since public assistance is considered a part of general government expenditures, this discussion of social security financing will be confined largely to social insurance. It is the fiscal aspects of social insurance that are obscured, in large measure because private insurance is so often the point of reference in discussion.

In private insurance, benefits must be paid out of a fund created and maintained by premiums collected from those insured. Premiums must be assessed according to the degree of risk involved and the amount of benefit payable. A private insurance company must relate costs to benefits, must provide for self-contained and sufficient reserves, and must guarantee the payment of benefits by specific contract.

None of these is necessary in compulsory social insurance. The direct relation between benefits and premiums paid is unnecessary because participation is compulsory. A strict relation between benefits and contributions is in fact inconsistent with adequate protection; lower income groups cannot pay in full for the protection they receive. Separate and self-contained reserves are not mandatory because of the existence of the taxing power of government. The guarantee to individuals that future obligations will be met rests ultimately not upon a record of contributions and the existence of a reserve but upon the understanding and acceptance of social security as a necessary public responsibility.

If benefits are to be paid out of funds contributed only by or for those insured, one of two plans must be used. The system can be operated on a pay-as-it-goes basis, with rates adjusted currently to meet outlays. A reserve plan can be adopted, with level rates high enough to provide reserves to meet future liabilities or contingencies over a period of years. If the ultimate liability of government is admitted, however, contributions do not have to be directly related to benefits, and general revenues may be drawn upon in whole or in part. Decisions as to sources of funds become a part of the problem of general fiscal policy. Separate insurance reserves are unnecessary.

Unemployment compensation and old-age insurance are now financed on a more or less self-contained basis. To use only earmarked funds from pay roll taxes and to relate contributions to benefits were undoubtedly necessary originally to obtain public acceptance. Also, it was and is difficult to justify the use of general revenues so long as a large part of the population is not covered. Even so, there are considerable differences between the financing of the existing system and private insurance financing. In the first place, benefits are more generous, relative to contributions, for those in lower income groups, for persons with dependents, and for older persons, who receive or will receive more generous old-age benefits than those contributing over most of their working life. Second, pay roll taxes sufficient to create a full reserve to take care of increased future liabilities of old-age and survivors insurance have not been levied. That the old-age insurance plan as now financed will require a government contribution after some years is recognized, but only unwillingly and fleetingly by many persons.

Direct contributions from participants should not be abandoned. They reflect the desire of persons to pay, at least in part, for what they may receive; that is, to participate in financing, not only as taxpayers, but also as potential beneficiaries. To maintain the contributory principle does not justify the use of pay roll taxes on employers, however. In fact, the only justification for such levies as earmarked social insurance taxes lies in their use as an incentive to reduction of risks. The employer can do something about the risk of occupational accident and disease. The adjustment of employer premiums for workmen's compensation insurance to the degree of risk involved plays a real part in loss prevention. Over other risks of individual income loss, including that of unemployment, the employer has little control, however. The application of experience rating to pay roll taxes for unemployment is popular. Taxes have been reduced as a consequence. But in view of the individual employer's inability to deal with the major causes of unemployment, it is doubtful that ex-

perience rating has appreciably reduced unemployment. Employer pay roll taxes were used originally to justify employee taxes, but perhaps it is being increasingly recognized that the incidence of employer contributions falls elsewhere. Pay roll taxes on employers are productive of revenue, but a regressive tax based upon wage payments is of doubtful value. If a pay roll tax on employers were to be considered as a part of the general tax structure instead of as a source of social insurance funds, it hardly seems likely that it would be adopted.

Recognition of the contributory principle in the form of taxes on the income of beneficiaries does not necessarily imply that all insurance funds should be obtained from that source. Social security benefits, along with other government expenditures, should reflect an over-all fiscal policy which seeks to restrict expenditure when demand is pressing upon production and to encourage expenditure when deflation appears. Direct contributions should, at the most, be equal to benefits at reasonably full employment. Under such conditions, there would be little effect on total consumption expenditure. When benefits increase because of more than frictional unemployment, funds should be obtained, through general revenues, from less deflationary sources.

It might well prove desirable to increase the expansionary effect of benefit payments upon consumption by establishing lower rates of direct contribution than those necessary to equal benefits at reasonably full employment. This again is a fiscal policy decision, related to the distribution of income, the strength of investment demand, other sources of Treasury revenues, and similar factors. Like other aspects of fiscal policy, the extent to which direct contributions are relied upon to meet benefits at high employment should be subject to continuing review and altered if conditions warrant. Periodic reconsideration of sources of funds would be required because of the increasing old-age benefit payments expected over the next several decades, in any event.

To confine revenues to contributions made by or for those insured and to operate within separate and self-sufficient funds simply obscures the relation between social insurance financing and general fiscal policy. To treat the two as entirely separate factors eliminates no underlying problems; it simply makes it more difficult to be consistent.

For example, a pay-as-you-go program that achieved annual balances in social insurance funds would, in depression, either have to provide such meager benefits that it would be meaningless, or the rate would have to be so high that other taxes levied on contributors would have to be lightened or eliminated. Actually, a pay-as-you-go plan for unemployment insurance is advocated seriously by few persons, even among those who advocate annual balance of the Treasury budget. Rather, it is suggested that reserves should be utilized so that what

is saved in good years can be paid in bad years. But in drawing on its reserves in depression, the unemployment fund must ask the Treasury to redeem securities held by the fund. To do this, either the Treasury borrows from the public or increases its taxes. In the first instance, limited compensatory fiscal action is provided. The budget, in a narrow sense, may be in balance, but the budget plus the current position of the unemployment fund does not balance—more cash is being paid out than is being collected in taxes. In the second instance, heavier taxes are being collected in depression, which is what would result with a pay-as-you-go unemployment insurance fund. The only difference lies in the greater range of tax sources available to the Treasury than to the fund.

A reserve in a comprehensive government insurance program is a very different thing than private insurance reserves. A private concern can, by accumulating reserves, build up claims against others that can be exercised in the future. Government can accumulate no claims against "others" in the aggregate. Whatever the financial scheme adopted, the goods and services consumed by beneficiaries must come currently from the national product. The real burden of maintaining the unemployed in depression cannot be placed on the employed during prosperity by accumulating dollars; no more can the present generation as a whole assume the real burden of maintaining the future aged.

The government cannot practicably create a reserve in any form except its own obligations. There is no reasonable alternative to making the cash receipts of a public reserve fund available for Treasury expenditure or debt redemption and crediting the fund with government securities.

But that one arm of government has a reserve in government bonds to meet future obligations does not eliminate the problem of meeting those obligations. When the insurance fund must make cash outlays over and above its cash receipts, it must draw upon its interest income or upon its reserve. When this happens, the Treasury must provide the money, either by taxation or by borrowing. If there were no reserve, the same amount could be raised in the same way and transferred to the fund as a Treasury expenditure. For example, if the fund exchanges Treasury obligations for cash which the Treasury raises by public borrowing, it is true that the public debt has not increased, whereas a direct Treasury contribution to the fund, obtained by public borrowing, does increase the public debt. But in both instances, the public debt held *outside* the government and its agencies, which is the significant measure, has increased.

It may be argued that the creation of a reserve reduces the privately-held government debt and the resulting interest burden on the public

as taxpayers. Therefore it is easier for the government to raise money later when it must transfer cash to the insurance fund for benefit payments than it would have been in the absence of a reserve. This rests upon the assumption, however, that tax revenues other than those from pay roll taxes would have been the same, whether pay roll tax revenues sufficient to create an insurance reserve had been levied or not. This appears to be a dubious assumption. Decisions with respect to taxes versus borrowing for purposes of general expenditure can hardly be made without reference to the collection of large sums through pay roll taxes as insurance contributions.

Pay roll taxes on employees are desirable in order to retain the contributory principle to a limited degree. Beyond that, they are simply taxes that bear heavily upon consumption. Benefits are government expenditures which tend to be promptly and wholly reflected in consumer expenditures. If social security revenues and benefits are viewed in this light as part of the whole fiscal problem facing government, the positive role of social security in stable prosperity could be made much more consistent and more significant than it now is.

This approach to social security finance would resolve certain financial problems in the existing insurance system. It would eliminate the entire debate over the old-age reserve fund. That the old-age insurance program has been deflationary since its inception, that it will continue to be so for some years as currently financed, and that it would be considerably more deflationary over a longer period were a full reserve being created, worry almost everyone who has interested himself in the problem.

Many persons argued against increases in rates of contribution for old-age insurance in 1939 because of their deflationary effects. Many of these same persons consistently argued for increases in those rates in 1943 and subsequent years on the same grounds. But these were matters of fiscal policy, not of old-age insurance. That increases were scheduled at a time when inflationary pressures were great was accidental.

With a fiscal approach, time would not have to be spent in estimating the amount and duration of unemployment benefits payable out of individual state reserves. The abandonment of employer contributions, with experience rating provisions, would check the fiscally unsound practice of lower contributions when unemployment is low and higher contributions when unemployment increases.

The use of government revenues for social insurance benefits carries with it certain other implications which should at least be mentioned. There should be as nearly complete coverage of the population as is administratively feasible. It is hardly equitable to draw upon income

taxes, for example, paid by those who are outside the entire program.

Again, it is difficult to justify the use of general revenues to pay benefits well above the minimum to those who, when employed, had larger incomes. Considerably more emphasis upon the adequacy of minimum benefits, with a much smaller spread between minimum and maximum benefits, would be necessary.

The plight of those who were too old to qualify for old-age insurance benefits might be reconsidered. The use of general revenues as a source of funds would strengthen their claim to benefits more or less comparable to those received by insured workers. Their inclusion would mean a marked increase in old-age benefits, which the nation might or might not consider it could afford. But if we cannot afford fairly universal old-age benefits now, the existence of a reserve will not of itself increase our ability to afford them later. The number of aged will in fact be larger, relative to the working force, in the future, than it is at present.

The integration of social security finance with Treasury finance implies that fiscal aspects of social security should be consistent with general fiscal policy. Most important, it implies that general fiscal policy should be related to levels of employment and production. In periods when consumption expenditure ought to be encouraged, to obtain a government contribution to social security benefits from sources as regressive as pay roll taxes will not allow either social insurance or fiscal policy to play its part in promoting production and employment.

Last, to recognize the relation between the fiscal aspects of social security and the general fiscal problem also implies federalization and unification of all social insurance programs—a development that is of itself currently as unlikely as the adoption of this entire fiscal approach to the financing of social security. Nevertheless, to view the financial aspects of social security in these terms brings the issues into much clearer focus than they are at present.

DISCUSSION

HARLEY L. LUTZ: The theme song of this session appears to be stable prosperity, and our task in this discussion is to discover the connection, if any, that social security may have with that condition. I must begin in a skeptical vein.

1. I doubt if there can be stable prosperity, except in J. B. Clark's static state.

2. We would not be satisfied with a wholly stable prosperity any more than we would be with a static state, even if we could achieve it. We should feel obliged to resist any change, innovation, or departure from the established pattern that would threaten the stability.

3. Above all, we would dislike stable prosperity attained through government action, for that would involve regimentation and large public spending. By this time we know that we have had enough, and more than enough, of both.

Whether we are to have a stable prosperity or, as is more likely, a variable prosperity which will include good, middling, and lean years, there would be more of it if there were no need of a social security program than there can be because we must have such a program. In other words, the social security program is a burden to be carried. In the moralistic sense, a burden may be a blessing in disguise, but it is seldom so regarded in the field of economics.

In any event, we do have a social security program with a long, if not in all respects a glorious, future before it, because there are and probably always will be certain groups of persons who must receive economic assistance. We could, for a time, eliminate the need of such assistance by a forcible and sufficiently drastic equalization of income. This would shortly become a sharing of the poverty rather than the prosperity. Any improvement of low incomes that may be achieved through natural and unforced measures would be more than welcome. There is no hope of permanent advantage from compulsory measures to this end.

In the economic sense, the support of dependent or needy persons means a diversion to their use of a portion of the current product. Originally, it was mainly a direct diversion "in kind." Now it is mainly done by diverting money income. Originally, also, individuals and private agencies carried the bulk of the load. The share thus carried is still substantial, but the role of government in this field has recently been greatly expanded. There is continuous pressure to increase the primary responsibility of the public treasury for the support of a social security program.

Here is the point at which some have sought to establish a connection between social security and prosperity. Dr. Townsend came first, and he has gone farther than any of his imitators in promising unlimited prosperity by a scheme of collecting money from the productive members of the community and paying it out to the old folks.

There has been a lot of talk, including a considerable quantity of nonsense, about the effects of the taxes and the payments involved in social security.

Actually, the effects here are not distinguishable from the effects of taxing and spending generally. Taxing and spending, together, constitute a transfer of purchasing power with no alteration of the total, but this does not lessen the burden for those who must pay the taxes. The support of the nonproducing groups by levying taxes and spending money is a drain upon, not an addition to, our prosperity.

There are two ways of viewing the social security program. One is essentially the Townsend concept, which involves paying out money to everyone under stated conditions, such as a certain age, having a baby, catching a cold, and so on. A member of my staff in a study of social security describes this general trend as "making a fountain out of a dolehill." The other approach is to regard social security as relief.

The federal program straddles this issue. A means test is required in all categorical assistance, but not in OASI or unemployment compensation. The cessation of wage income with unemployment is generally regarded, however, as presumptive evidence of need, and in many cases it is, no doubt, conclusive evidence.

Our problem is the correct determination of the program we should have. In squirming about to cover up the relief element we have gone semantic, so we call it "social insurance." This high-sounding name serves both to confuse and to conceal the issue. In no part of the whole program except OASI is there even a pretense that the beneficiaries are paying for what they get. Mr. Meriam has suggested that the employers' taxes are shifted to the workers in various ways, but no correlation can be established between the amount of pay roll tax thus laid on a given employee and the benefits which he may eventually receive. The workers contribute nothing directly under unemployment compensation except for small supplemental payments in four states—Alabama, California, New Jersey, and Rhode Island. Under OASI they supply directly only half. The weighting of the OASI formula in favor of the small income and coverage of an indefinite number of collateral beneficiaries for any given primary beneficiary, suffice to demonstrate the element of relief in the only feature of the social security program that thus far has been mislabeled insurance.

No matter how thin you slice it, it is still relief. We should be smart enough and courageous enough to recognize and deal with the whole as an out-and-out relief program. This would involve a universal means test, with provision of public support only when and to the degree that means are lacking or are insufficient.

If we interpret our social security system, in the economic sense, as a problem of relief, which means that it is a burden to be carried, two principal questions emerge: How much should be done? How much can be done?

Under some circumstances a conflict will ensue between these issues. The reasonable minimum that humanity dictates may or may not be within our capacity. In such event, capacity obviously must be the controlling factor.

The answer to the question of how much should be done is that every resident of the United States should have enough, by way of consumption goods and services, to enable him to live at a reasonable minimum standard of health and

decency. This goal requires public provision of the minimum only for those who would otherwise not have it. That is, the objective should be to provide for the needy.

If we are to take seriously the projections of the population experts, some sobering reflections upon the possible future scope of the social security program are inevitable, even when it is viewed simply as a relief program and not as a "ham and eggs" scheme. The following data on the changing age distribution are probably familiar to all.

ESTIMATED FUTURE POPULATION OF THE UNITED STATES, BY AGE DISTRIBUTION^a

Age Groups	1945		1960		1980	
	Number (000)	%	Number (000)	%	Number (000)	%
0-14 years	32,150	23.5	31,694	21.5	29,259	21.1
15-64 "	94,567	69.4	100,475	68.3	101,712	64.5
65 and over	9,731	7.1	14,818	10.2	22,051	14.4
	136,448		146,987		153,022	

^a W. S. Thompson and P. K. Whelpton, *Estimated Future Population, by Age and Sex 1945-1980* (U. S. Census Bureau). Assumes medium fertility and mortality and no net immigration.

These projections provide no basis for determining, now, how many of the aged in another generation will require public assistance. There is every reason to suppose, however, that as the absolute number of persons aged sixty-five and over rises, the proportion that will need relief will not be less than now. It may be greater.

In any event, the cost of supporting the aged is destined to rise substantially over the next generation. In economic terms this means a diversion of a larger share of current product from the use of those who produce it—the active workers—to the use of those who no longer contribute directly to the product.

We can test approximately the difference in the burden of supporting the aged with and without a means test. By 1960, there will be some 15,000,000 persons aged sixty-five and over. If one-third will need assistance and if the average allowance were \$40 a month, the cost would then be 2.4 billion dollars. If payment were made to all who are aged sixty-five and over, regardless of need, the cost at \$40 a month would be upwards of 7.2 billions. In 1980, the cost for the needy alone would be 3.5 billions, and for a general old-age pension, regardless of need, it would exceed 10.5 billions.

We are dealing here with the one item of old-age relief. When we add the other features that have been proposed by way of broadening the social security program it should become evident that the cost will rise to an enormous total unless steps are taken to restrict this cost to those who clearly and unequivocally need help.

The extent to which this rising diversion of product will involve a growing burden leads to my second question of how much can we do? The answer here turns upon economic productivity. This will become increasingly important,

as the composition of the population changes. A relatively smaller group of workers must produce enough to provide for themselves and their families and also to allow an immensely greater relative diversion to the nonworker groups, young and old, but principally the latter.

We have fallen into the comfortable but rather dangerous habit of assuming that the increase in productivity which has hitherto characterized the growth of our economy will automatically continue. Some who assume this evidently believe that the growth will continue, despite the blunders that are made and the burdens that are imposed. Sir William Beveridge, for example, assumes that the productivity of the English worker will grow at a rate sufficient to support his program, despite useless work like digging and filling holes, regimentation, and steady inflation of the public debt. A recent White Paper is much less optimistic; indeed, it puts production ahead of full employment as a goal. Here in the United States we tolerate the malpractices of government, illustrated by the levy of severely progressive taxes, and of labor, illustrated by limitation of output, "featherbedding," paying the least efficient member of a craft as much as the most efficient, and so on, without regard to the effect of these burdens and restrictions upon productivity.

Instead of the complacency so often encountered as to the automatic and inevitable growth of productivity, we should make this a matter of major concern. We should realize that this growth depends upon numerous factors which can be impaired, thwarted, or destroyed. Among the growth factors are inventiveness; the spirit of enterprise, including managerial energy and the readiness to assume risks; and a flow of capital into industry to finance the maintenance of existing plant and to provide for its improvement and expansion. Underlying the vigorous expression of these and other factors essential to dynamic growth is the maintenance of economic vigor by leaving with those who gain income, by whatever means, enough of that income to preserve the essential incentives.

Assuming, as I must, that our national resources are not unlimited (for I reject the printing press as a resource), then we face the problem of apportioning these available resources. The style in which we can support our needy groups must be governed by relative priorities. There is a limit to what can be diverted by government from the productive processes without impairing output. If we require, for some other purpose, more of what can safely be thus diverted, then we can do less for the needy. I state this in terms of imperatives, although a certain flexibility is possible. Ultimately, however, it becomes a matter of imperatives.

To summarize: Social security payments are always a burden. They are a diversion of product and of income for the support of our dependents—young, disabled, unfit, and aged. We can and should minimize this burden by undertaking to support only those who are in need. We should never think of the expenditures made to support the needy, whether out of current private or public funds, as adding to or sustaining our prosperity. We should never make or promise to make payments in support of the needy on a scale that will undermine the incentives of individuals to provide for their own support.

We should never withdraw from the workers more than is currently required to carry the burden.

The final point in this summary raises some important questions connected with the financing of social security as a relief problem.

We have straddled the financing just as we have straddled the relief issue. More is being collected under OASI than is being currently spent for OASI benefits and the categorical aids together. Yet the so-called "reserve" is bankrupt in an actuarial sense. From the relief view we are taking too much; from the insurance view we are taking far too little.

A frank recognition of the problem as one of relief would clarify the financing. As relief, the cost would be a regular, normal, recurring expenditure. Like every other such expenditure, it should be financed through a regular, recurring tax levy. In short, it would become a regular budget item.

But it would then become necessary to broaden the federal revenue system, to assure larger receipts and wider incidence. Since the social policy would be the relief of all needy, the fiscal policy should be designed to cover the cost by reaching, in some way, all who have income. Employee pay roll taxes are well adapted to reaching the wage segment of national income, but the levy upon some other forms of income through withholding presents serious difficulties. Mr. Meriam has suggested a special flat tax rate on all net income of individuals, a plan which is likewise exposed to difficulty of collection in the case of certain nonwage incomes. A federal retail sales tax would be more nearly generally diffused than any other, but the prospects of adoption are not bright.

It is likely that any generally applicable tax would need to be earmarked for the relief purpose, for sugar-coating reasons. Ordinarily, earmarking is not good budget and fiscal practice, but it could be condoned in this instance by the magnitude of the task and the special circumstances involved.

What, then, shall we do to be saved?

1. Limit the program to relief of need.
2. Minimize the relief load by taking the gerontologist's advice and encourage the old folks to keep on working. "The good die young," says the poet. "The idle aged die sooner," says the gerontologist.
3. Reduce other governmental burdens and costs, if relief is to have high priority as a governmental obligation.
4. Spread the tax for relief among all who have income.
5. Pay as you go. We are told that treasure laid up in Heaven is safe from moths and thieves. We cannot give this assurance as to a treasure laid up in a federal trust fund.

SELMA MUSHKIN: The chairman has asked that I supplement the discussion with some figures on the financial operations of social security programs. The figures are highly tentative, but they suggest, I believe, within a reasonable margin of error the magnitudes involved.¹ Analysis of these figures and

¹ These estimates, with some modifications, are presented in *Social Insurance Financing in Relation to Consumer Income and Expenditures* (Selma J. Mushkin, Anne Scitovszky,

of the economic operations of the programs strongly supports Mr. Swan's conclusion that social security measures as a complement to other measures can contribute toward the achievement of a sustained high level of employment and greater economic stability.

First, fairly large sums are involved in even a minimum social security program. In the fiscal year 1946, the social security budget (federal, state, and local) for old-age and survivors insurance, unemployment insurance, public assistance, and general relief, totaled about 2.5 billion dollars; in the first part of the fifties, social security disbursements under existing legislative provisions would average about 3.0 billions annually.

There are, however, many gaps and inadequacies in the existing programs. There are gaps in coverage, benefit amounts are inadequate, and there is no nation-wide protection against disability or the cost of medical care. Even at a high level of employment, millions of families each year incur a loss of income because of temporary unemployment, old age, disability, or death of a breadwinner; millions each year incur the burden of serious illness and the high cost of medical care. At lower levels of employment, the incidence of these risks is even more widespread. The extent of personal hardship and of social and economic waste resulting from lack of protection or inadequate protection against these common economic hazards, attests to the urgency in terms of human welfare for the expansion and extension of the present programs. If more adequate social security protection were provided, such as that proposed in the Wagner-Murray-Dingell bill of 1945, for example, the total social security budget in the early part of the fifties would average about 8.0-8.5 billion dollars annually; the social insurance part of this budget would amount to about 6.5 billions at a high level of employment, to about 7.5 billions at a 10 per cent unemployment level,² and under conditions of seriously declining employment to perhaps 9 billions. Annual disbursements for both the present social insurance measures and an expanded program would rise gradually because of the progressive increase in the number of annuitants on the benefit rolls and the secular rise in the number of aged in the population and hence in the number eligible for old-age or extended disability benefits.

Social security measures could be improved more extensively than proposed in the Wagner-Murray-Dingell bill. Old-age and extended disability benefits could be designed to compensate more fully for the income loss sustained on retirement from the labor force. The system of protection against dependent old-age, death, and perhaps extended disability of the family breadwinner might be so designed as to co-ordinate within one plan public assistance payments free of present means test restrictions and contributory social insurance payments. The prepayment health program proposed in the Wagner-Murray-Dingell bill could be designed to make the coverage universal in scope. Many

and Leila N. Small, Social Security Board, Bureau of Research and Statistics Memorandum No. 63, June, 1946). The assumptions and qualifications of the estimates are presented at some length in the appendix to the memorandum.

² Assumes a decline in employment during the course of the year from 5% to 15% of the civilian labor force.

of these changes could be made with only small net additions to the social security budget; others would require a substantial increase.

The increase in the budget for a more comprehensive system of social security would not involve new costs. By and large protection against these risks does not create the cost; the existence of the risks largely creates the costs. In the absence of protection, millions of individuals incurring the risks are suffering the costs and burdens arising from disability, unemployment, old age, and sickness. In the absence of protection, the nation is meeting part of the cost in a less productive labor force and in the social consequences of poverty and of sickness.

Furthermore, the cost of social security protection cannot be tested simply by measuring the social security budget against a given level of national income. It is only in part a question of what proportion of national income should be devoted to social security. There is also the question of what contribution social security can make to the national income.

Second, the present social insurance programs with their accompanying contributory and contingency reserve features are already fairly well designed as an automatic corrective to cyclical fluctuations in the future. In the immediate years before the war an average of about 1 billion dollars annually was added to the social insurance reserves with a consequent drain on purchasing power at the very time that the government was attempting, through other measures, to expand the national income. However, the initial period of unemployment reserve accumulations is now past, the old-age and survivors insurance program has achieved a degree of maturity, and greater emphasis has been placed on the contingency functions of the old-age and survivors insurance reserve. Whereas in 1941, with about 10 per cent of the civilian labor force unemployed, social insurance disbursements under the Social Security Act amounted to about 435 million dollars, in the early part of the fifties at the same unemployment level, disbursements under these programs, it is estimated, would be roughly 2 to 2.5 billions. The 1941 reserve accretion of 1.6 billions—after taking account of the distribution of contributions and benefits by income class and the difference between the composite consumption function of contributors and beneficiaries—was estimated to result in about 1.1 billions reduction in consumption.³ In the early part of the fifties the net consumption effects, of the contributions on the one hand and benefits on the other, would be approximately neutral at 10 per cent unemployment if the combined tax rate for old-age and survivors insurance is maintained at the present 2 per cent level. If unemployment should increase more sharply, the present social insurance programs would effect a primary increase in consumption of about 1 billion dollars as compared with the level which would otherwise obtain. At full employment they would result in a decrease of about the same amount.

Adoption of an expanded program such as that proposed in the Wagner-

³ Selma J. Mushkin and Leila N. Small, *Social Insurance Benefits and Contributions in Relation to Family Income, 1941* (Social Security Board, Bureau of Research and Statistics Memorandum No. 59, June, 1944).

Murray-Dingell bill of 1945, with its accompanying 8 per cent pay roll tax rate and reserve provisions, would improve the composite consumption effects of the social insurances. We have estimated that in the early part of the fifties this type of expanded program would have approximately a neutral consumption effect at full employment. At 10 per cent unemployment it would lead to a primary increase in consumer expenditures of about 2.5 billion dollars and with a more serious increase in unemployment (averaging 20 per cent) it would stimulate a primary rise in consumption of approximately 5.0 billions.

Third, social security programs have a composite influence on consumer expenditures. They affect the spending-saving decisions of families in each income group by meeting objectives for which families, particularly those in the middle income group, now save and by decreasing amounts of dissavings in times of emergency and, therefore, the bills to be paid and savings to be replenished at other times. They have a redistributive effect favorable to an increased level of consumption. We have estimated that the redistribution effects would lead to either a ten cent or a twenty cent increase in buying power per dollar of disbursements and of taxes, depending upon whether it is assumed that benefits are spent in accordance with the marginal propensity to consume of the average family in each income class, or alternatively that the marginal propensity to consume benefit income is unity. Furthermore, the social security programs now are adapted to achieve a net government contribution to income at levels substantially below full employment and could be adapted to achieve such a positive effect at a high level of employment.

Fourth, the social insurances have an effect on total national output and expenditures disproportionate to the size of the program. A positive change in the consumption function of the middle income groups would enhance the income-creating force of a given volume of private net investment and, by assuring that a higher level of consumer expenditures would be associated with a given national income, facilitate the maintenance of a high income level. Moreover, secondary repercussions of an initial change in consumption induce a change in a volume of income and expenditure roughly one and a half to two times the size of the primary increase or decrease. The change in gross national product associated with the estimated consumption effects of the program proposed in the Wagner-Murray-Dingell bill (for example) would be approximately zero at full employment, but about 3.75 billion to 5 billion dollars at 10 per cent unemployment and about 7.5 billions to 10 billions at 20 per cent unemployment.

Because of the size of the programs, their anticyclical corrective features, their composite effect on consumer expenditures, and their secondary effects on expenditure and production, the conclusion must be drawn that the social security programs can contribute toward economic stability. Some changes in financing are required if the programs are not only to have an expansionary effect under conditions of declining employment but also at a high level of employment. These changes can be made within the context of a contributory social insurance program, provided social security measures are expanded in

coverage and scope and the public assistance measures and plans for medical care for the needy are integrated with the social insurances. Changes in financing are, I believe, necessary to, and a logical concomitant of, the achievement of a complete coverage of the population and of an integration of social insurance and public aid.

Before concluding may I turn briefly to the "political" aspect of the problem. Mrs. Burns some time ago pointed clearly to the barriers against adoption of an economically satisfactory social security system. The barriers are created by the distrust of future legislative action, by the fear of irrational pressure groups, and by the lack of wider understanding of the economic issues involved.

I should like only to point out that the social insurance program is today strongly identified with its contributory base. While I appreciate the objectives underlying a redefinition of social insurance to continue the emphasis on rights to benefits but to discard the contributory aspects, I do not believe such a redefinition at this time is politically feasible or economically essential. The potentially expansionary effects of the social insurances could be considerably improved without abandoning, or threatening the abandonment of, a contributory program. Judging from our own social insurance experiences and experience abroad, a contributory program can be implemented with small contributions from individuals.

A contribution from general revenues toward the social insurance program has already been accepted in principle by Congress and is an integral part of the financing of social insurance of other countries. The case for a contribution by the government toward the cost of social insurance is quite clear, especially if coverage is made broader or nation-wide. The community as a whole derives substantial benefits from such a program and it is wholly appropriate that at least part of its cost should be met out of general funds, particularly in view of the reduction in other governmental costs which social insurance makes possible.

Complete integration of social insurance financing and general governmental financing in my judgment would necessitate a revision of the social insurance programs as they are now formulated. Restrictions in coverage, differentiation in benefit amounts among individuals, and many of the eligibility provisions appear inappropriate to and inequitable in a program supported wholly out of general funds. Complete financing from general revenues means one of two extremes in coverage: either a universal coverage with protection given as a matter of right or a coverage restricted to the needy on a means-test basis. General revenue financing of a system with universal coverage would necessarily require some solution of the problems of integration with existing separate programs such as that for railroad, government workers, and others and of determining the basis for variation of benefits to reflect differences in cost and standards of living.

M. C. URQUHART: One can readily agree with Dr. Meriam that the security and well-being of the people of a country depend in large part on the main-

tenance and improvement of its productive capacity. This applies both to national security against foreign aggression and, that being attained, to the provision of the goods and services required to meet human needs within the country itself. But to obtain the desired results, it is necessary also that the capacity be used to a high degree of intensity. Without that neither the requisite current output of commodities nor the potential and desired productive capacity itself can be attained.

Dr. Meriam's view that a substantial contribution toward reaching the objective of high output and large capacity may be made by expanding international economic activity will also receive wide support. International investment of the right sort can be important as an outlet to savings and expanding international trade can be stimulating to domestic investment. This may contribute to international amity as well as to the level of economic activity at home and abroad. But, for both institutional and purely economic reasons, it is highly doubtful whether action in the international field alone can ensure a high and stable level of employment in a wealthy country even if its external trade is large relative to total national output. Failure to maintain employment and income in a large country will itself cause a deterioration in the international situation through the communication of the depressed conditions abroad; and the effects will become cumulative.

The attainment of a high and stable level of output will be difficult if reliance is placed upon any single device. It would appear much easier if a varied program of consistent policies were developed. Policies which promote international trade and foreign investment, stimulate private home investment, adapt public investment to a countercyclical pattern, stabilize consumer expenditure, and provide appropriate general fiscal measures are all needed. Through the stabilization of consumer income social security measures may play an important part if, as Dr. Swan has pointed out, suitable over-all fiscal policy is followed. They would not be sufficient in themselves to solve all unemployment problems, but their contribution to the general program could be quite significant.

The magnitude of the net contribution that may be made by social security schemes will depend in part on how they affect the other variables which stimulate employment. If the social security program leads to offsetting reactions in other parts of the economy its value as an employment creator and stabilizer will be diminished or eliminated. Its effectiveness therefore depends on both the readiness of the various individuals and groups in the community to accept the schemes and on the form that the schemes may take.

It is, of course, possible that the introduction of a particular scheme in a particular form might cause repercussions in the political and business atmospheres which could lead to a decline in total economic activity. But such reactions are not a necessary feature of social security and the probability of their occurrence may be reduced as time passes. Some types of social security may be more acceptable at a given time than others and likewise some forms for each type may prove most acceptable. Further, attitudes may change. For instance, as the income of a community increases, the burden of

transfer of income among individuals or of an individual's income from one period to another may become less. Hence what cannot be "afforded" at one time can be later on. Again as experience is gained from one type of social security the acceptability of another type may increase.

As noted above the "acceptability" of a scheme cannot be divorced from its form entirely. What may be acceptable in one form, say financing by employ  e pay roll deductions, may be unacceptable in another form, such as financing from general revenue. It is also true that entirely apart from acceptability the method of financing and paying benefits may have an influence on the magnitude of the contribution to employment creation and stabilization. But it should be emphasized that extensive results for employment purposes may be obtained from a number of different forms if an over-all approach is taken by the government to its whole fiscal and employment policy. And different forms may be used for different types of social security.

In this regard I find myself strongly in sympathy with Dr. Swan's advocacy of pooling contributions (at least for some forms of social security) and of eliminating a strict dependence of benefits on contributions. In this way people would contribute when receiving an adequate income to do so and would be assured of definite benefits when specified contingencies or conditions occurred. It would, as he stated, also have the advantage of fitting in readily with general fiscal policy. Yet if this is not possible, a more strict insurance scheme with which general government finance would be integrated would still help in maintaining employment and income stability.

Dr. Meriam has mentioned the problem posed by changes in the price level which it is true may involve hardships on individuals particularly if a strict insurance scheme is used. A pooling system such as Dr. Swan has suggested would go far to make it possible to alleviate these changes, since changing prices mean changing incomes and at appropriate (probably fairly long) periods changes in current contributions and current benefits could be made. (Cyclically, from an income stabilizing point of view, changes in benefits with price variation would not be desirable if it meant declining benefits with falling prices associated with unprosperous conditions and increasing benefits with rising prices associated with high prosperity.) Even with unchanged benefits and gradually rising prices (although there seems to be no certainty that the latter will be a long-term trend), the effects of a social security scheme would still be stabilizing. From the point of view of preventing individual hardships, of course, it would be desirable to prevent large price rises.

Before commenting on some actual quantities involved in social security it may be worth while to note, at the risk of repeating the familiar, the way in which social security schemes may contribute to stability of employment and income through stabilizing consumer expenditure. For a positive stabilizing effect it is not necessary that benefit payments increase in depression and diminish during prosperity. The fact that benefit payments remain level—as they may in such schemes as old-age pensions and family allowances—means that the part of disposable consumer income that is made up of these payments remains stable, while income from the current sale of factor services declines.

On the other hand, even assuming no change in tax rates, the contributions or taxes which are a deduction from disposable consumer income will vary directly as employment and income as a whole varies. This means that to the extent that inpayments fall while outpayments remain constant, disposable consumer income will be higher than it would have been starting with the same initial income and no security scheme. The difference between consumer expenditure with and without the scheme will have a quantitative effect of the same order as that of an equivalent amount of investment. It, of course, assumes that in such a situation any government deficit associated with the scheme increases or any surplus decreases. If outpayments increase as prosperity declines and if tax rates are lowered, the effect is correspondingly the greater. In the first case, that of a steady level of benefits and unchanged tax rates, the effects would be to diminish fluctuations initiated by a decline in some other form of savings-absorbing expenditure. Only in the latter case of increasing benefits or decreasing tax rates or both would it be possible, theoretically, to prevent, through social security measures, any fluctuation at all.

In this respect, it has been suggested that attention might be called to the effects of payment of family allowances which have recently been introduced in Canada. This involves the payment monthly of an allowance for every child under sixteen. The monthly payments are five dollars for children of ages through five years, six dollars for ages six through nine, seven dollars for ages ten through twelve, and eight dollars for ages thirteen through fifteen. Payments are reduced slightly for the fifth and subsequent children receiving benefit in one family. These allowances are financed out of general revenue and amount to somewhat over 250 million dollars yearly. Part of that amount, probably about one-quarter, would have been allowed as a deduction from income tax in the absence of the scheme. To provide a standard of comparison, disposable consumer income was approximately 3,900 millions in 1939 and approximately 8,250 millions in 1945. Thus current family allowances are not quite $6\frac{1}{2}$ per cent of the former amount and between 3 and $3\frac{1}{2}$ per cent of the latter.

As an income stabilizer the family allowance payments should have the effect described above in that the total payments will change only as the total number of children and their age composition varies. The stabilizing effects will be accentuated or diminished if tax rates are lowered or raised. It may be noted that the Canadian government in official statements has announced its intention to aim at balancing its budget over a longer period than in any single year. Deficits in years of low prosperity and surpluses in years of high prosperity are envisaged.

It is difficult to estimate the quantitative effect that such a program might have. It is reasonable to suppose that the major portion of the children allowances will reappear in consumer expenditure. If consumer expenditure in a period of depression were maintained at a level of say 100 million dollars above what they would otherwise have been, the direct contribution would not be negligible. Again as a matter of comparison Canadian gross offsets to savings with high employment at present prices would probably be in the neighbor-

hood of 2,500 millions. The indirect effects both positive, such as helping to maintain investment in the consumer goods industries, and negative with respect to the effect of the taxation would have to be considered.

To round out the picture somewhat it may be worth mentioning that proposals for other types of social security have been made recently by the Dominion government to the provinces, who would participate, for their consideration. These would involve an expenditure of about 200 million dollars for old-age pensions for all persons aged seventy and over, 35-50 millions at present for old-age pensions for persons aged sixty-five through sixty-nine who would receive benefit after passing a means test, and 250 millions for a health plan. Unemployment insurance in connection with which receipts exceeded 80 millions in the fiscal year 1945-46 is already in effect. It may be seen that the effect of the whole social security plan when introduced would not be inconsequential.

In these comments main attention has been placed on the stabilizing influence of social security which would have the effect of diminishing any declines in employment and income. More might be said of the effects of increased security of income and of such redistribution of income as takes place on raising the whole consumption function, although the consequences of such effects are hard to evaluate quantitatively. Further attention might also be given to the possibility of helping to prevent any decline at all by varying rates of contribution or taxation and of benefit—variation in the latter being less likely in practice.

It would appear that social security is not apt by itself to solve the whole problem of maintaining income at as high and stable a level as desired. But it has its own justification on grounds of individual need and welfare. And if established it can be a very important item in the program of a government which is prepared to manage its whole controllable budget in the interests of high and stable employment.

EDWIN E. WITTE: Holding as I do the view that our social security program is basically sound, although it should be broadened and liberalized and can be improved upon, I find myself in disagreement with both of the principal papers and the first discussant and generally in agreement with the last three discussants.

Mr. Swan has ably presented the fiscal policy approach to social security, which makes social security important only as it may contribute to or hinder economic stability. Fiscal policy considerations are important but by no means all that matters. Social security is a justifiable end in itself, not merely a minor measure for the attainment of economic stability. As expressed by the late Msgr. John A. Ryan: "Industry exists for man; not man for industry." Full employment, important as it is, is not the complete answer to the problems of destitution and dependency. Let us, indeed, consider the economic effects of social security measures, but while exploring the mazes of fiscal policy let us not forget our objective: the relief of need and destitution in all contingencies which confront individuals and families.

With Mr. Meriam I am pretty much in agreement up to the point where

he makes proposals for basic changes in the social security system. I recognize, as he does, that what we can do by way of social security depends upon our total economic production. With the three basic conditions he set forth for the maintenance of a high level of production, which will make possible an adequate system of social security, I have no fault to find.

But I cannot follow Mr. Meriam and Professor Lutz in their proposal to finance social security from pay roll taxes on the employed workers but to pay benefits only to persons in need. Behind this proposal is the assumption that such a system would result in keeping the costs at a minimum. That this is very doubtful is indicated by our own experience with old-age assistance, particularly in western states. Where social security payments are made dependent upon a showing of need, the definition of need will be broadened to include most everybody. To place the burden of supporting social security upon the workers and then not to pay any benefits to most of them is as politically unrealistic as it is basically inequitable.

In his criticisms of the basic concepts of the present social security system, Mr. Meriam revived the old canard, "Made in Germany." It is true that national social insurance originated in the Germany of Bismarck. But Mr. Meriam overlooks that the system he advocates—of benefits limited to people in need but financed from pay roll taxes on all workers—was Hitler's plan of social security. I know that Mr. Meriam dislikes everything about Hitler and the Nazi regime as much as do all other right thinking people. I do not suggest that he is consciously trying to imitate the Nazis, and I assume that he is not aware that Hitler abolished unemployment insurance benefits as a right and substituted for them relief payments on a needs basis. But if the fact that social insurance originated in the Germany of sixty-five years ago is used to condemn our system of social security, it needs to be appreciated that the proposal to convert social security into a relief program has been tried only in Hitler's Germany and ended with the downfall of the Nazis.

Let no one be in doubt about the relations of social security to a system of free enterprise. Social security is not a program inconsistent with freedom of enterprise or the principles of democracy. On the contrary, it operates to make our democracy the more valuable and to strengthen our system of free enterprise.

EWAN CLAGUE: I should like to make two simple points. First, there is every indication that the economic world of the future will be more unstable and more dynamic than ever before. There will be new inventions, new processes, and new industries. Rapid change may mean great progress, but such change inevitably bears heavily upon the people affected by it—which means primarily the millions of workmen and their families in this country. One road, which is usually the easiest to take, leads in the direction of trying to stabilize every small part of the economic system—each employer, each job, each worker. It is this which leads to rigidity in the economic system. I do not believe we can reach the progressive over-all stability by trying to build a thousand small stabilities. The other road leads in a different direc-

tion. The truest stability to my mind is that of the spinning top. We have tremendously rapid change at the present time but workers feel secure because job opportunities are plentiful. It is my belief that a comprehensive system of social security which provides adequate protection against the major risks faced by the individual and his family will lead to more flexibility in the economic system, to more production, and to a higher standard of living. In this sense, social security is a necessity to the successful operation of the free enterprise system.

My second point is very brief. Many people talk as though the unemployment of a worker for a week or for a month is an economic loss to the nation. From an extremely short-run point of view, that might be true; any work at all, no matter how unskilled, would add something to the nation's production. But from a slightly longer point of view, what gain is there to the economy in having a trained, skilled workman forced by necessity to take an unskilled job and remain there for months, for years, and perhaps for life? A well-functioning economy is a structure consisting of the right men in the right jobs. Social security creates a genuine economic gain, and raises the longer-run productivity of the nation when it tides workers across temporary periods of unemployment, thereby aiding them to get back into the economic system at their highest skills. This is good economics, not bad social policy.

GERHARD COLM: Dr. Meriam's main point is that the formal social security system plays only a minor role in the quest for economic security. Social security will be mainly advanced by maintaining productive efficiency, lessening international unrest, and maintaining a close approach to full employment. If we are successful in these threefold basic policies, we need only a nation-wide local relief system to take care of those who will be in need even under favorable general economic conditions. Dr. Meriam sees no justification for a general social insurance system. He criticizes the existing social insurance system because it is limited in scope, gives money to people who do not need it, and is not adjustable under conditions of increasing prices. It makes use of harmful pay roll taxes and is based on a merely fictitious actuarial computation. But first of all Dr. Meriam believes compulsory social insurance is not consistent with a philosophy of self-determination and self-reliance.

I shall not deal with the philosophical aspect of Dr. Meriam's paper, but shall simply state my belief that the American people want a social security system which protects against the basic hazards of our economic life as a matter of right rather than as a matter of administrative discretion that is through the operation of a relief system that is based on a means test. On the other hand, I believe that much of Dr. Meriam's criticism of the existing social insurance system has considerable validity, but the way to meet this criticism is to improve the social insurance system rather than to discard it.

Recent proposals, I believe, would take care of much of Dr. Meriam's criticism. It has been proposed to extend the social insurance system in

scope and coverage, to supplement pay roll contributions by other means of financing, and to adjust benefit payments to the changes in the price level. These proposals do represent a certain shift in the philosophy of social insurance from the original concept. If we believe that social insurance must follow exactly the same principles as private insurance, then it must be based on actuarial computations, should be financed exclusively by contributions, and benefit rates would not be adjustable. These deficiencies can be met, however, if we recognize that those who are eligible draw their benefits as a right which is based on the law and not on the exact individual contributions that have been paid by them or for them.

Dr. Meriam believes that under a policy that approaches full employment a social insurance system is no longer necessary. I believe that an expanded social insurance system can and must make a very important contribution to the objective of maintaining such an approach to full employment. This should not be understood as meaning that social insurance should be maintained and expanded merely for the purpose of a full employment policy. A broad social insurance program is desirable first of all for social objectives, but in pursuing that social objective economic considerations must enter the determination of the size and character of benefit payments and the method of financing. Social insurance has a direct influence on the size of the active labor force, on the mobility of labor, on wages, and on purchasing power, and is a very important factor in the fiscal situation. In all these respects its effect may promote or impair the full employment objective. Ill-devised or excessive benefit payments and contributions may cause unemployment. A well-devised system may be an important stabilizing factor in the economy.

An expanded social insurance system may be an important anticyclical factor. In case of a depression contributions automatically decrease and benefit payments increase. The system thereby provides a cushion, bringing the downward spiral of the depression to a halt at a level higher than the rock bottom to which it would drop without a social insurance system.

But we cannot be satisfied with a social insurance system that makes a contribution only when the economy is in the midst of a downward spiral. We cannot be satisfied with a social security system that is economically "neutral" except in a depression. A social insurance system, I believe, can and should contribute to strengthening the basic structure of the economy and should make it less vulnerable to fluctuations. An expanded social insurance system, together with other measures of social security, can help to sustain a large and stable market for mass products. This will, however, be accomplished only if the benefit structure and the method of financing are integrated with other economic and fiscal policies. We should investigate the interrelationship between social security, the size of the labor force, the wage structure, the mobility of labor, consumption and savings attitudes, and the flow of purchasing power.

The preceding discussion showed that considerable contributions to the solution of these problems have been made here and abroad, but much more remains to be done.

VITAL PROBLEMS IN LABOR ECONOMICS: APPROACHES AND AREAS FOR RESEARCH

APPROACHES AND PROBLEMS IN WAGE RESEARCH

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Empirical research on wages may be discussed in three broad areas: (1) the structure of wages in a firm, an industry, or geographical area at a particular time, measured in over-all and occupational averages; (2) movements in the wage structure over time; and (3) wage policies or "actions" of firms and of unions. Government wage policies may also constitute an important field for research, but their greatest peacetime significance is in the effect they have on the wage policies of companies and unions. I should like to explore briefly some of the difficulties that confront research in each of these first three areas, the questions and problems that need to be answered, and the approaches that are likely to be most fruitful in answering them. Primary attention will be given, however, to research on wage policies.

A. Studies of *wage structures* have always been handicapped by incomplete and noncomparable data, especially when earnings on particular jobs were being compared. Even the useful wage surveys made during the war for the War Labor Board by the Bureau of Labor Statistics were subject to the limitations of differences in job content, differences in the times at which data were collected within an industry, incomplete data on many jobs, and difficulties in determining industry and labor market boundaries.

Nevertheless, the work now being done by the Wage Analysis Branch of the BLS on wage structures and occupational wage relationships in a number of industries is an example of the kind of contribution that government research agencies can make to wage research. Further detailed and carefully conducted studies of wage structures are needed as a background for studies of wage movements and wage policies, and government agencies have better facilities to undertake these studies than do the universities. Occasional spot studies by university research workers are still useful, however, to point the way to the kinds of studies needed,¹ and especially to explore the question, how did the particular wage structure get the way it is? This leads directly into studies of wage movements.

¹ As an example, see C. Canby Balderston, *Wage Differentials: A Study of Wage Rates in Philadelphia Metal Plants* (Industrial Research Department Monographs, Wage Series, No. 1, Wharton School of Finance and Commerce, University of Pennsylvania, Philadelphia, September, 1939).

B. In research on *wage movements*, the basic question is: how have the relationships between different jobs, plants, sections of an industry, industries, and geographical regions changed over a period of time, and why? Recent studies, for example, have attempted to chart the cyclical pattern of industrial wage variations,² changes in the North-South wage differential in a number of industries,³ and the timing and amounts of wage rate changes in a particular industry.⁴ In studies of this sort, the lack of comparability between jobs, plants, or industries is not so serious if these differences persist over the period studied.

But attempts to explain why the movements have occurred lead inevitably into a consideration of the factors affecting the determination of wages. Broad economic forces, such as an increase in the demand for labor in a particular industry relative to the supply, explain trends, but these are usually translated into actual wage rates through the wage policies or "actions" of firms and unions. Furthermore, when we attempt to explain why a certain firm or union or industry is a "wage leader," we are inevitably faced with a consideration of the factors that affect wage policies. It is the thesis of this paper that this third area for wage research is the most promising one for future study. With the growth of strong national unions wage determination in this country is increasingly on a collective basis, yet we know only in a general way what the process is and what factors affect wage decisions in various types of situations. If public policy is to be shaped intelligently, we must know more about the process of collective wage setting, its determinants, and its results.

C. *Wage policies* or "actions" may be determined on an industry-wide, regional, wage leader or individual company or plant basis. Research on wage policies can be classified into two broad categories: (1) What is the process of policy formulation within the respective groups, what factors bears on this process, and what kinds of policies or actions result? (2) What are the effects of these wage decisions? Both of these categories can, in turn, be viewed from the standpoint of policies on wage levels and wage changes, and policies on intraplant wage relationships and methods of wage payment.

Studies are needed of the process of wage policy formulation or wage actions in a number of industries, companies, and unions. In this task the economist may well seek the assistance of his colleagues in psychology, sociology, social anthropology, and political science, because the kinds of questions that need to be answered are not solely, or even

² John T. Dunlop, *Wage Determination Under Trade Unions* (New York, 1944), Ch. VII.

³ Richard A. Lester, "Trends in Southern Wage Differentials Since 1890," *Southern Journal of Economics*, April, 1945, pp. 317-344.

⁴ W. Rupert Maclaurin, "Wages and Profits in the Paper Industry," *Quarterly Journal of Economics*, February, 1944, pp. 196-228.

largely, economic ones. The following list of questions was developed in group discussions with psychologists and sociologists at M.I.T.⁵ and is intended only to be suggestive of the problems that should be considered by research in policy formulation:

1. What is the power structure of the group? Is there a leading union local or a leading employer or an association? Where is the authority or power located in these units? A classification of union and employer and union-employer situations according to their power structure would be very useful. A structure in which the union is the dominant force, as in the women's garment industry, for example, would clearly result in a different kind of wage policy than one in which unions and employers are of relatively equal strength, as in the automobile industry.

2. What is the process by which wage policy decisions are made within this structure? For example, in a given union, who initiates policy proposals, and who has the final decision-making authority?⁶ What part do the following play: top officers, executive committee, wage policy committee, attorneys and research advisors, and rank and file membership?

3. What are the factors which affect the kinds of policies that result from this process? These may fall roughly into three groups:

- a) The objective limitations on the range of possible policies or actions and the pressures deriving from these limitations, such as
 - (1) Nature of labor market, particularly as to location and condition,
 - (2) Nature of product market—elasticity and shifts in demand for the product; competitive products,
 - (3) Relation of labor costs to total costs,
 - (4) Degree of unionization in the labor market and product market,
 - (5) Occupational and wage structure in the plant, community, or industry,
 - (6) Broad trends in employment in the industry and in the economy generally.
- b) Other forces or pressures that are pushing people in the situation, such as
 - (1) Pressures for prestige or power,
 - (2) Outside pressures of other employers or unions, trade associations, advisors, and financial interests,
 - (3) Pressure deriving from the time perspective of the policy

⁵ I am particularly indebted to Professor Dorwin G. Cartwright, of the Research Center for Group Dynamics, M.I.T.

⁶ Shister has explored this question in a general way, basing his observations largely on union constitutions. Joseph Shister, "The Locus of Union Control in Collective Bargaining," *Quarterly Journal of Economics*, August, 1946, pp. 513-545.

makers, as in the desire to benefit present union members rather than provide long-term employment opportunities,

- (4) Pressures for nonwage objectives in collective bargaining.
- c) What the policy makers know about the situation, such as
 - (1) How they view the economic possibilities or limitations; how the "facts" appear to them,
 - (2) What they know about wages in the locality or in the industry,
 - (3) What they know about the strength of the other side, and the probable costs of a strike or lockout,
 - (4) What they see as the consequences of various alternative wage policies, and what is the influence of current or past experience, tradition, knowledge of consequences in similar situations?

A projected study of wage policies or decisions in the men's shoe industry in Massachusetts illustrates the application of this approach. Here we find the most important production center organized by an independent federation of craft unions, which bargains with a city-wide association of employers. Normally, there is severe product competition from companies outside New England, some of which have contracts with A.F.L. or C.I.O. unions. In addition, there is some product competition from other unionized New England firms.

Wage changes negotiated by the union and the employers' association in this shoe center have tended to form a pattern for changes in most other centers in New England, although one important outside firm has frequently been a "wage leader" for the entire shoe industry in New England in the past. These labor market and product market interrelations are fairly complicated, and need to be examined closely.

The proposed study would begin with the major center. What is the power structure of the union group and of the employers' association? Are some important crafts or firms dominant in each group? How are the negotiators chosen, and have they full power of commitment? How are the bargaining negotiations conducted? What part do attorneys and research advisors play?

Attention would then be directed to discovering the factors which affected the demands that were made and the decisions that were reached. The objective limitation of product competition from other areas is important to the employers; how important is it to the union? Are other pressures more important to the policy makers? Are they more concerned with "position" and the consequent pressure to satisfy present union members than with the future capacity of the employers to provide employment? What do the negotiators on each side know about the situation that they are dealing with—the cost and profit

picture, wage levels in competitive firms, etc.? What past experiences or consequences have been impressed on their minds and now affect their current thinking? Effects of past policies will certainly influence current and future policy making.

When the situation in the major shoe center had been carefully explored, the study would branch out into the other centers in New England. Do they simply follow the pattern established, or is the process of decision-making more complex? If so, many of the same questions would apply.

Stated in another way, these questions are directed toward the problem of explaining how people (managers and union leaders and their staffs and constituents) behave in various kinds of situations involving decision making on wages. Perhaps what we need to develop are some hypotheses, along the lines suggested by Professor Bakke and others, on the kinds of behavior that are likely to result when various combinations of factors exist. Fruitful research on wage policy formulation needs this kind of integration at the start, in order to go below the level of superficial generalization or aimless case studies.⁷ Hypotheses developed in a few situations studied in detail may then be tested in a larger number of situations examined less intensively.

The major difficulty facing this kind of research is getting reliable interview information on the factors that have motivated the people in the situation. This cannot be done in a brief interview, and research workers will have to "live with" many wage-policy situations in order to get beneath the surface. The "art of asking why" will have to be improved by research workers in this field.⁸

Some examples of the types of situations which deserve further study from the standpoint of wage policies or actions are:

1. Uniform (or nonuniform) industry-wide or market-wide bargaining.⁹
2. Large national unions having contracts with most of the firms in

⁷ This type of approach in local labor market research has already been proposed by Lloyd Reynolds, "Wage Differences in Local Labor Markets," *American Economic Review*, June, 1946, pp. 366-375. See also, Richard A. Lester, "Wage Diversity and Its Theoretical Implications," *Review of Economic Statistics*, August, 1946, pp. 152-159. For a suggestive discussion of the contribution that psychological analysis can make to a different branch of economic research, see George Katona, "Psychological Analysis of Business Decisions and Expectations," *American Economic Review*, March, 1946, pp. 44-62.

⁸ For some useful suggestions, see Paul F. Lazarsfeld, "The Art of Asking Why in Marketing Research," *National Marketing Review*, Vol. 1, 1935, pp. 26-38. Some of the experience with public opinion surveys and employee attitude surveys should also be helpful. On the former, see "Measuring Public Attitudes," *Journal of Social Issues* (entire issue), May, 1946; on the latter, Arthur Kornhauser, "Psychological Studies of Employee Attitudes," *Journal of Consulting Psychology*, May-June, 1944.

⁹ A good beginning has been made by Richard A. Lester and Edward A. Robie, *Wages under National and Regional Collective Bargaining: Experience in Seven Industries* (Industrial Relations Section, Princeton University, Princeton, 1946).

an industry, but bargaining individually with them, beginning possibly with a "leader." (E.g., the Steelworkers' Union with respect to basic steel and steel fabricating.)

3. National unions seeking, against some employer opposition, to gain uniform regional contracts, but with a substantial part of the competing industry either nonunion or subject to individual firm bargaining. (E.g., Textile Workers Union in the cotton textile industry.)

4. A union dealing with employers as a group in an important center of the industry, which nevertheless is subject to severe competition from other geographical areas which are either nonunion or organized by different unions. (E.g., the men's shoe industry.)¹⁰

5. National unions bargaining with different types of industries which have different elasticities of demand for their products. (E.g., the International Typographical Union with respect to different kinds of books and job printing.)

6. National unions dealing with expanding industries as compared to stationary or declining industries. (E.g., Airline Pilots and the commercial airlines, and the United Mine Workers in bituminous coal mining.)

7. National unions which bargain mostly on a local basis. (E.g., in the newspaper industry or in building service or construction.)

8. Large firms with branch plants, scattered geographically and possibly unionized by different unions. (E.g., International Harvester, General Motors.)

The second category of wage policy research—the effects of policies or actions—is clearly related to the first, for the policy makers' expectations as to the effects of a given policy and the actual, experienced effects will help to shape the policies of the future. Only a few studies have been made of the effects of union wage policies. The impacts of wage changes on costs, prices, technological change, and managerial investment decisions and on the flow of new investment into the industry need further exploration in various situations.¹¹

Another neglected research subject is the effects of certain kinds of company wage policies. For example, do we know whether an announced company policy of paying equal to or better than the prevailing wage (however defined) is really effective in attracting and

¹⁰ An excellent example of a study dealing with this type of situation is Gladys L. Palmer, *Union Tactics and Economic Change: A Case Study of Three Philadelphia Textile Unions* (Philadelphia: University of Pennsylvania Press, 1932).

¹¹ *Industrial Wage Rates, Labor Costs and Price Policies* (Washington: Temporary National Economic Committee, Monograph No. 5, 1946), is an example of a type of study which needs to be repeated. See also a study of Cincinnati printing industry: Joseph Shister, "The Economics of Collective Wage Bargaining: A Case Study," *Journal of Political Economy*, August, 1943, pp. 338-347.

holding workers? What makes people want to work for a certain firm? How important are wages in comparison with other inducements to work? Economists have probably put too much emphasis on the importance of wages in attracting and holding workers to a firm¹² and they have certainly neglected the study of the effectiveness of different kinds of wage policies in stimulating the will to work.

With the increasing trend toward "pattern" adjustments in wage changes, a particularly significant study of effects would center on the adjustments that result when other firms (or unions) are forced to follow the wage pattern established by the leader. Some firms in the steel fabricating industry, for example, were forced to adopt the 18½ cent pattern on top of higher steel costs resulting from the increase in basic steel wages. How did they succeed in adjusting to this? One type of effect, of course, is on the quality of the labor-management relationship, which, in turn, will affect future policy decisions.

In the past, economists have been more interested in policies on wage levels and wage changes than in intraplant wage policies and methods of wage payment. Until wartime experiences, especially under the War Labor Board, stimulated the interest of economists, these latter problems were left pretty much to those interested in personnel administration and in industrial engineering. Among the significant general questions that need further study are the following:

1. In job evaluation, for example, what are the problems of maintaining a job evaluation system in the face of changes in job content, changes in labor demand and supply in particular occupations, etc.? Under what circumstances have unions and employers been able to use job evaluation to reconcile their differences over internal wage relationships? What has been the experience with industry-wide attempts to get a more rational wage structure, as in steel or in the West Coast aircraft industry? At what points does the methodology of job evaluation conflict with union attitudes and policies on intraplant wage relationships?¹³

2. On methods of wage payment, Professor Slichter has already explored the conditions under which unions seem to prefer time rates and incentive rates.¹⁴ One of the thorny problems in wage incentives is gaining worker acceptance of changes in output standards, and this needs more study under union conditions. Some unions demand that

¹² For some evidence on the relation between wage levels and the movement of workers, see Charles A. Myers, and W. Rupert Maclaurin, *The Movement of Factory Workers* (New York, 1943).

¹³ See, for example, the points raised by Solomon Barkin, "Wage Determination: Trick or Technique?" *Labor and Nation*, June-July, 1946, pp. 24-26, and further discussion in the November-December, 1946, issue, pp. 51-54.

¹⁴ Sumner H. Slichter, *Union Policies and Industrial Management* (Washington, 1941), Ch. X and XI.

particular workers affected by technological or process changes "share in the savings" through equal or higher piece or incentive rates. What effect does this have on the wage structure of the plant, on internal relationships within the union between job holders, and on interplant wage structures when the union seeks to bring job rates in other plants up to the highest level found in any plant? Are other methods of wage payment more suitable as a means of "sharing the savings" and stimulating greater output? Profit sharing under union-management co-operation on production problems is a new development that bears watching.

This brief discussion of the areas and problems in wage research has only touched upon the multitude of questions that remains to be studied. They are numerous enough and difficult enough to require the combined efforts of a number of university research groups, government agencies, and individual research workers. Each should try to concentrate on situations which are relatively close at hand and can be studied intensively. Economists will need the advice, and preferably the assistance, as fellow research workers, of their colleagues in the other social sciences. This need for interdisciplinary co-operation among the social sciences is another reason for concentrating attention on studies in our own "back yards," where real collaboration is possible.

If these efforts are to be fruitful, however, they need encouragement and integration through some group such as the Committee on Labor Market Research of the Social Science Research Council. Furthermore, it is to be hoped that this is the first of a series of conferences, held more often than once a year, to exchange ideas, experiences, and tentative conclusions on research in wages and other aspects of the labor-management relationship.

A PLAN FOR FUNDAMENTAL RESEARCH IN LABOR RELATIONS

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I. Introduction

The objective of this paper is to suggest a framework for development of a general theory of labor-management relations.¹ Such a theory must give proper weight to all of the motivating forces (social, psychological, economic, etc.) which determine the thinking and actions of employers and unions. It cannot rest on the assumption that the actions of workers, unions, and employers stem entirely or even mainly from economic motivations.² It must recognize as principal variables many factors which labor economists have heretofore banished to that intellectual no man's land where other things are always equal.

Obviously, it is impossible to study at one time the interplay of all the variable forces which determine the broad relations between unions and employers throughout the economy. For practical purposes, it is necessary to break down the study of labor-management relations into small segments. But such segments must be part of carefully conceived and well integrated over-all plan of research based upon a consistent body of theory as well as objective reporting of facts.

It is feasible, I believe, to break down the study of labor-management relations into segments by studying different types of relationships in much the same way as the chemist studies elements. In other words it should be possible to determine the distinguishing characteristics of a particular type of labor-management relationship just as the chemist determines the properties of a particular element.

A conglomeration of unrelated case studies of labor-management types, however, in itself would not lead to a theory of labor-management relations. In order to develop a theory it is of primary importance to understand the interrelationships between types, the manner in which

¹ The term "labor-management relations" we define as the relationships between union officials and employers and the relationships between employees and management which stem directly or indirectly from union-employer relationships. This definition will include union-management relations in *organized* plants and also employee-management relations in *unorganized* plants to the extent that such relations are influenced directly or indirectly by what takes place in organized plants.

² Too many studies of union-management relations rest upon assumptions that employers are interested only in profits and workers think of little else but wages. Research in the field of "human relations in industry" has demonstrated that workers, union leaders, and businessmen are motivated by social, psychological, or political factors as well as economic factors. I refer here to the various well-known works of outstanding exponents of this school such as Elton Mayo, F. J. Roethlisberger, Benjamin Selickman, Burleigh Gardner, William F. Whyte, and E. Wight Bakke.

types conform to patterns, and the forces which account for the patterns which are set. In reality, labor-management relations as a whole make up a *constellation* of interrelated types and patterns which are held together by a complex combination of social, economic, and political forces. If we can develop a method of determining the characteristics of these types and then work out hypothetical assumptions concerning their probable interrelationship within a broad constellation, we will have a basis for at least a tentative formulation of a general theory of labor-management relations.

II. *The Unit of Research: The Labor-Management Type*

In the framework which is being proposed here the unit of research is the labor-management type. In defining a type of labor-management relationship, we should analyze two general sets of characteristics: first, the forces (economic, social, psychological, or political) which determine the policy decisions and actions of management on the one hand and union officials on the other; second, the structure of power relationships within management and within the union as well as the balance of power between them. It should be possible, then, to classify observations of human, economic, and political behavior with reference to these two general categories which we can call for simplicity "the factors which account for decision making" and "the structure of power."

In looking at the first set of characteristics—the factors which account for the decisions made by the union and the employer—we are forced to evaluate both economic factors (such as for example influences of the product market, the factor market, cost-price relationships, etc.), psychological and human factors (such as the drive for status and power, relationship of the leader to the group, emotional adjustment, societal framework, routine behavior, etc.), and political factors (management cliques, union factions, influence of government, etc.). In this way it is possible to discover a pattern of motivations which explain the decisions made by union officials and management executives in a particular labor-management relationship.³

In studying different labor-management types, we should expect to find that the decisions made on particular issues (such as for example managerial prerogatives, union security, grievance procedures, arbitration, etc.) follow a rather logical pattern within the framework of motivations on the union and management side. In effect, the motiva-

³ It is necessary, of course, to set forth in some detail a schedule of points to be checked in analyzing (1) economic factors, (2) psychological and human factors, and (3) political factors. A tentative schedule of such items is being used on some labor-management research projects now in progress at the University of Chicago. The discussion of such items in detail, however, is beyond the scope of this paper.

tional patterns of the union and the management really constitute the two sides of a mold which shapes the relationships between them, and the decisions made by each party on individual issues can be expected to bear the imprints of this mold. In short, we should look for consistency in the thinking and actions of the employer and the union in any clearly distinguishable labor-management type.

The welding together of the union and management systems of policy into a relationship which governs the actions of one to the other forms the second set of characteristics of a labor-management type. If we assume that the labor-management relationship is partly a power relationship, we can address ourselves to such questions as these: Where does the power lie? How is it acquired or from where is it derived? Over what areas does the power of each side extend? How is it used? What are the consequences of its use? These power relationships can be divided into two analytical categories for the purpose of study: the internal power relationships within the management and union groups; and the balance of power between the management and the union. The analysis of the consequences of the use of power is applicable to both categories of power relationships.⁴

By focusing attention on these two sets of characteristics it is fairly easy to distinguish consistent labor-management types.⁵ To be sure, the characteristics of these types cannot be defined as *precisely* as the chemist defines the properties of elements. Yet, even where we know only a few of the more important motivations on the union and management side in particular case types, it is possible to find a logical explanation of joint actions taken by the parties and to develop a reasonably accurate guide for prediction of their future course of action.

For example, in a study to be published shortly of the relationship between the U.A.W.-C.I.O. and the General Motors Corporation we have found a very clear-cut motivational pattern on both sides. The insistence of the corporation on protection at all costs of its managerial

⁴ In discussing the first group of power relationships, for example, we should consider such things as the power of the individual company executives to make decisions. Whom do they have to consult? What pressures are brought to bear upon them? What are the legal or economic limits of the use of this power? What economic factors tend to limit or to enlarge their power? Likewise, on the union side we should look at the power of the union officials with respect to the rank and file, the struggle for control between opposing factions, the prestige of the union with the workers, and effects of the market on the power of particular unions.

An even more crucial problem is the analysis of the "balance of power" between management and the union. In some types the power of the union is so great that it can force its will upon management. In others management has the upper hand. In still others, the power may be fairly evenly matched. In all cases it is necessary to determine the extent to which one side has the power to initiate action or dictate policy.

⁵ In preliminary research undertaken by the Industrial Relations Center of the University of Chicago during the past year several different case types have already been analyzed in some detail.

functions has its roots in the conviction that the union is striving to undermine the authority and status of management and has as its ultimate objective the destruction of private enterprise. The union officials who deal with General Motors seem to be convinced that full production and full employment in the automobile industry can never be assured unless social controls are exerted over big business enterprises such as General Motors. These leaders advocate that the union, and if necessary the government, should participate in shaping the major policies of General Motors and the automobile industry to ensure protection of the economic interests of both workers and the public.

General Motors, accordingly, identifies its tough policy in keeping the union at arm's length with an ideological battle for preservation of free enterprise and the American way of life. The U.A.W.-C.I.O. identifies its fight for joint economic planning with a crusade to usher in a new era for the common man.

The conflict between the corporation and the union, therefore, is a clear-cut manifestation of a power struggle between those forces advocating unrestricted freedom for private enterprise and those forces advocating some form of planned economy. These opposing economic and political philosophies are more than academic beliefs in the minds of the parties. They are connected with the preservation of status and authority if not the survival of both the management and union officials involved.

Within such a motivational framework, the union-management relationship appears to be consistent. The Corporation looks upon collective bargaining as a means of *containing* the union within the narrow area of wages, hours, and conditions of employment. The union looks upon the collective bargaining agreement as little more than a first step toward social and economic planning. Both sides, of course, have an interest for different reasons in making the contract work. As we might expect, matters such as grievance procedures, seniority rules, working hours, and even wage determination appear to have been disposed of by give-and-take through collective bargaining. The real conflict, which appears to have no basis of solution, centers on what collective bargaining should be and should include. The clash of interests here seems to color even the day-to-day relationships from top to bottom, and comes into sharp focus in struggles over negotiations of new agreements (as in the strike of 1945-46 over the wage-price-profit issue).⁶

In the cases of two other automobile companies, a small novelty manufacturing concern, and four small steel fabricating companies, we

⁶ This study along with two other case type studies of other satellite automobile companies will be published sometime in 1947. The distinguishing characteristics of each type, of course, will be discussed in some detail as well as the interrelationships between the types.

have been able to distinguish other types of labor-management relationships with sharply different managerial and union motivational patterns resulting in an entirely different kind of collective bargaining.

Although it is possible to classify labor-management relation by types, it is certainly true that such types are apt to be unstable. For example, the labor-management relationship in the novelty company today falls into a "union-management co-operation type." Two years from now, it may have been transformed into one of labor-management conflict because of a change in the motivations of one side or the other. Accordingly, in analyzing case types, it is important to look for the elements of stability or instability in the particular relationship being studied. Obviously, there are many other similar difficulties involved in studying and classifying case types which could be discussed if time would permit.

III. *Different Kinds of Types and Their Interrelationships*

Up to this point we have discussed merely the tools (methods and concepts) which can be employed in a study of labor-management types. In order to understand the dynamics of labor-management relations we postulate that the labor-management types conform broadly to patterns, and that some types constitute generating centers which have a profound influence on other types. The types fall into three general categories: generating types which have a direct influence on other types, satellite types which are dependent to some extent on generating types, and semi-isolated types which are more or less self-contained. Let us digress for a moment to relate this concept to known facts about modern business enterprise and modern unions.

In this country there are literally hundreds of different types of business enterprise. There are small businesses which are owned and run by an entrepreneur with one or two employees. There are mass production enterprises employing over 200,000 workers. Some companies are in fact as well as in theory controlled by their stockholders; some are "management controlled" or "banker controlled"; others are dominated by a single individual. Our business enterprise system is composed of a heterogeneous conglomeration of different types of business organizations. Yet, it is a system—a mixture of competitive and monopolistic forces—which somehow or other provides the goods and services which our society demands. It is a well-known fact, of course, that there is a high degree of concentration of economic and political power in the hands of so-called "big business." Giant corporations such as for example U. S. Steel, General Motors, General Electric, International Harvester, and other leaders in their respective industries or trades have a very profound effect on the social, economic, and political

life of the nation, and in many respects they set the competitive patterns to which hosts of other businesses adjust or conform.

Just as we have a system of business organization, we also have a labor system, or put in other terms, a union movement. Within the union movement there are many different types of union organizations, large and small. The very large unions, such as for example the United Steelworkers, the United Automobile Workers, and the United Mine Workers, each has well over 500,000 members apiece. Some international unions, on the other hand, have as few as 1,000 members. Then there are "independent" unions of various sizes and types and subject to various influences. Some unions are run by virtual dictators; others are very democratic. In the aggregate they constitute our union movement which is now a very powerful and dynamic force in this country. Directly or indirectly this union movement affects the thinking and action of practically all employers, organized or unorganized, for the nonunion employer is constantly aware that a union will be in position to organize his plant unless he meets or betters the wages and working conditions in the organized establishments.⁷

In the union movement as in the system of business organization there is a high degree of concentration of economic and political power in large dominant organizations. The power and influence of the executive board of the United Steelworkers—the organization which is now the base of the C.I.O. pyramid—reaches far beyond basic steel into scores of related steel processing and fabricating industries. John L. Lewis as President of the United Mine Workers has probably wielded in the past decade economic and political power as great and far-reaching as that of the House of Morgan in its prime. The Teamsters Union represents concentrated power by localities—witness Dave Beck in Seattle—not to mention the influence and control of the building trades unions in our large metropolitan areas.

In both the system of business organization and the union movement there are elements of competition and monopoly, of bigness and smallness, of personal struggles for prestige and position, and above all of concentration of far-reaching economic and political power. In this context, the study of labor-management relations is in reality the study of the influence and impact of these two heterogeneous systems on each other. Our method of tackling this problem is to determine the relationships in various types of interaction between employers and unions and to construct in general terms the patterns to which such types seem to conform.

In this connection the first task is to look for the types of labor-

⁷ Cf. F. H. Harbison, "Some Reflections on a Theory of Labor Management Relations," *Journal of Political Economy*, February, 1946.

management relationship which constitute nerve centers because of great concentrations of power on both sides. Here are three examples: General Motors and the U.A.W.-C.I.O.; U. S. Steel and the United Steelworkers-C.I.O., and the bituminous coal industry and the United Mine Workers-A.F.L. These types of relationships represent great concentrations of power. Through collective bargaining among themselves and negotiations with the government the parties determine the wages, working conditions, and conditions of employment of the hundreds of thousands of employees in these basic industries. Literally thousands of other employers and unions in the same or related industries, furthermore, are influenced in their relationships directly or indirectly by the decisions reached in these great labor-management nerve centers. We thus term these and other similar kinds of relationships generating types.

In order to determine the structure of power in labor-management relationships throughout the country it is necessary, obviously, to find out where these concentrations of power are, how the power relationship is developed into a workable arrangement between the parties, and the nature and extent of the influence of such centers of power. In itself this will require considerable exploration and research. The three examples cited above are influential national nerve centers. There are other important generating types of labor-management relations which are nerve centers in a particular region, market, industry, or work classification. These are important to study also.

The next task is to study the relationship of satellite types to the generating types. Let us first look at a few examples of satellite types. The relationship between the management of the Studebaker Corporation and Local 5 of the U.A.W.-C.I.O., although different in very important respects from that existing between General Motors and the International U.A.W.-C.I.O., is nevertheless dependent on what takes place within the General Motors empire. The base wage rates at Studebaker are set with reference to the General Motors rates. To a large extent the "market climate" for automobiles is determined by General Motors and the other two dominant auto manufacturing concerns. Broad union policies, furthermore, are determined in no small measure by what concessions can be secured by the union from General Motors.

As a rather unique situation representing co-operation between a union and a large company, the Studebaker relationship does not conform to the General Motors type. Yet, because of its dependent position in the industry, the Studebaker relationship tends to adjust to a "climate" created by the G.-M. relationship.⁸ To date we have

⁸ Our initial studies of labor-management relations in G.-M. and in Studebaker, of course, go into these points in much greater detail.

discovered several different variations of satellite types which adjust in this fashion to generating types.⁹

Finally, recognition must be given to a category which we describe as semi-isolated types. In terms of the economy as a whole or the extent of the market these do not constitute nerve centers or power concentrations. Their influence on other types of labor-management relationships, furthermore, is not very great. At the same time they are not influenced significantly by what happens in the generating types. The relationships between the union and the management are more or less self-sufficient.¹⁰

Within the framework outlined in this paper fundamental research should proceed in two directions. First, there is a great need for case studies of different types of labor-management relationships in which the principal social, psychological, political, and economic factors which determine each individual relationship are carefully analyzed. Such case studies can be conducted in all parts of the country by interested research specialists in industrial and human relations. They should deal with situations in small plants as well as large industrial empires and with relationships between single unions and single employers as well as those involving regional or industry-wide bargaining. Second, the theoretical relationship between the generating forces and satellite types calls for the co-operation and combined thinking of many scholars in the field. In this way it will be possible to develop a theory of labor-management relations which should provide a basis for predicting the probable course of such relationships and a guide for recommending appropriate measures for improving them.

If we can make progress in these two directions, we may be able to find some answers to questions such as these: How do co-operative relationships arise between employers and unions? What changes in human relations accompany the working out of harmonious union-management relationships? What are the limiting factors on development of such relationships, and where achieved, how stable or permanent are they likely to be? Is large-scale unionization consistent with a private enterprise system or will it eventually change such a

⁹ For example, the relationship between the Jones and Laughlin Steel Corporation and the U.S.A.-C.I.O. bears most of the earmarks of the relationship between U. S. Steel and the same union. In this connection, we have examined in a preliminary way about fifteen different situations in the basic industries which appear to fit into the classification of "conforming" satellite types.

¹⁰ We have been examining lately the union-management relationship in a small novelty and manufacturing concern dealing with an A.F.L. industrial union. It appears to be capable of settling its own affairs and is relatively immune from the influence of decisions made on the outside regarding such matters as wage, working conditions, union security, or management rights. We have also observed that the very mature type of relationship which exists today in the men's clothing industry is surprisingly self-sufficient and in many respects independent of what goes on in other manufacturing industries.

system? Could joint labor-management planning, similar to that now existing in the men's clothing industry, be extended to the basic industries? If so, what would be the probable political and economic consequences of such a development?

The approach suggested in this paper can be criticized on many scores. It will be difficult, as Myers has pointed out, to get reliable interview information on the factors which motivate workers, business managers, and union leaders. It is difficult to classify complex kinds of relationships between unions and employers into types. We will find, furthermore, that such relationships may have a habit of changing type. This approach also calls for interdisciplinary collaboration among scholars and considerable common planning of research between institutions. Then, too, we might as well recognize it is impossible to determine all of the characteristics of any labor-management type, and certainly we will have departed from this world before we can define all of the types which exist. It is far better, however, to face up to total problems than to study only neat little facets of problems on which statistics or facts are easily obtainable.

PRODUCTIVITY IN THE AMERICAN ECONOMY

NATIONAL PRODUCTIVITY: ITS RELATIONSHIP TO UNEMPLOYMENT-IN-PROSPERITY

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"Productivity on the national level" begins as a purely arithmetical concept. It is the quotient of national income or product divided by total hours worked, and it is expressed in cents per hour. If income or product in different years is expressed in constant dollars, then the derived figures for national productivity measure changes in over-all physical output per man-hour worked. They are as reliable as are the data for income or product and for total hours. But since over-all productivity is a composite figure, it reflects not only the changes in man-hours required to turn out each given product but also the shifts in relative quantities and prices between industries or products. Hence we should distinguish in our thinking between "operational" and "structural" changes in national productivity.

The year-to-year changes in over-all output per man-hour do not carry any imputation of merit or credit as between men, management, and machines; nor do they admit of useful analysis for this purpose. The same is probably true of all productivity figures above the level of the single plant. There are differences in significance and utility, of course, between our broad figures of national productivity and more limited measures, such as the familiar index of factory productivity of the BLS. But since both are composite expressions the difference is at bottom one of degree and not of kind. Available data permit us to work out separate productivity values for the respective industrial divisions of our economy—e.g., agriculture, manufacturing, even services—and these can be aggregated into our total figures.

National productivity is one of four basic arithmetical factors which together determine the development of employment and unemployment in successive years. The other three are the labor force, the national income or product, and the average hours of work. The

equation is a simple one:
$$U = F \frac{I}{PH}$$
 Where U is the Number Un-

employed, F is Working Force, I is National Income (or Product), P is National Productivity, and H is the Average Hours Worked per Year. (The values of P will be larger if it is based on Gross National Product instead of Income.)

In the arithmetic, an increase in national productivity will make for an increase in unemployment unless it is offset by corrective move-

ments in the other three terms. It is our normal hope and expectation that the offset will come primarily from an increase in national income, and secondarily from shorter hours or a relatively smaller working force. But if the other terms change insufficiently or perversely, then the increase in productivity is actually accompanied by (or "creates") a rise in unemployment. In our actual experience since 1900 the changes in productivity have been larger percentagewise than in the other elements in the right side of the equation. To that extent increased productivity may be called the key element in the development of unemployment before the war.

The chief purpose of this paper is to trace, arithmetically and historically, the leading role of national productivity in the creation of a new phenomenon—that of unemployment in prosperity, as evidenced by the conditions prevailing in 1940 and 1941. The level of business activity in 1941 was far higher than in any previous year—being 127.2 per cent of normal against 110.3 per cent in 1929 (Cleveland Trust Company index). Yet in that year the unemployed averaged 5 million, a figure also exceeding that of any year before the great depression, not excepting 1921. In 1940, with general business averaging a little better than computed normal, unemployment exceeded 7,400,000; while in 1924, the earliest previous year of similar normal activity, unemployment was only 2,400,000. This coexistence of normal and even booming business conditions with large-scale unemployment deserves careful inquiry. Our analysis may suggest certain broad policies with respect to hours of work and wage rates, as supplements to other lines of attack on future unemployment.

The sources of the data used are stated in the Appendix. We have studied figures both for GNP and National Income, with substantially similar results; but we shall use the income figures in this paper, because they appear more reliable for years prior to 1919, and also because they fall between the series of GNP and that of Disposable Income. In reducing our figures to a per capita basis, for year-to-year comparisons, it has seemed wise to allow for the steadily declining proportion of children. This has been done by giving half-weight to persons under sixteen. If the unweighted population were used some of the conclusions in this study would be overemphasized.

Our primary comparisons are between five well-separated years, each of which enjoyed approximately "normal business activity" according to the Ayres-Cleveland Trust index. These are 1900, 1910, 1915, 1924, and 1940. By selecting these years we can pretty well eliminate cyclical influences, and concentrate on the secular movement. For additional information we supply figures covering the boom years 1929, 1941, and also 1946 (partly estimated).

It seems best to rely chiefly on three charts which show graphically

how the unemployment of 1940 and 1941 developed out of the disparate movements of the formula factors. The data underlying the charts and also a table showing the percentage changes in significant items between various pairs of years—normal against normal, boom against boom, and normal against later boom—are found in the Appendix to this paper. Interesting calculations can be made involving depression years, but they are not particularly useful for this study. The same applies to comparisons between boom years and later normal years.

The most significant factor shown by our numerous comparisons is the tendency for productivity to increase at a faster rate than production (or consumption and income). This has been uniformly true, prior to Pearl Harbor, except in two *short* periods between normal and boom times (1925-29 and 1940-41) when product and income rose at an ultrarapid rate.

If productivity advances faster than per capita production, the arithmetical result must be a decline in the hours of work required per capita of population. And if working hours per worker do not fall as fast as the hours needed per capita, then the arithmetical result must be a reduction in the percentage of the population employed. Our charts show that both of these results developed between 1900 and 1940.

Between 1910 and 1940 the reduction in the work week—substantial as it was—proved insufficient to offset the decline in working hours needed per capita; hence there was an important falling off in the number of workers needed (employed) per capita. Between 1910 and 1924 this reduction was only 1.8 per cent, but between 1924 and 1940 the tendency accelerated and produced a reduction of 6.4 per cent. While these percentage figures appear small they are of great marginal importance—the 6.4 per cent decrease in workers needed per capita between 1924 and 1940 meant a reduction of about 3,200,000 in employment in the latter year.

The difference between the 6.4 per cent figure in 1924-40 and the 1.8 per cent reduction in 1910-24 explains in good part why mass unemployment in prosperity was apparent in 1940, as against the very minor problem existing in 1924. The underlying tendency towards increasing unemployment in successive normal years was existent prior to 1929; but it escaped notice, first, because it had not yet reached serious proportions, and, second, because it was obscured by the temporary boom conditions of the late twenties. As will be seen from Chart C, a substantial part of the unemployment of 1940 and 1941 grew out of a separate factor; namely, an embarrassing increase in the working force relative to population.

When 1940 is compared with 1910, the lapse of a generation brings out the divergence between productivity and production in striking fashion. An extreme way of showing what has happened is as follows. In these thirty years there was an increase of 103 per cent in national income in constant dollars, but this increase was produced by working total hours only 8 per cent greater in 1940 than in 1910.

Looking forward into the future, the crucial question will be whether we shall be able to reverse this tendency for productivity to expand faster than per capita product. On this point the results of 1946—to be discussed later—will be found startling rather than conclusive. The arithmetical rule involved may be summarized in the following alternative: either (a) we must increase production-consumption-income as fast as over-all productivity, or (b) failing that, we must decrease working hours sufficiently to offset the disparity, or (c) failing both *a* and *b*, we shall employ fewer workers per capita.

The "Stagnation Theory" and 1940-41 Unemployment

Our figures show clearly that the unemployment under study does not owe its origin to economic maturity or stagnation—as those terms are generally understood. The record high business activity in 1941 makes such an explanation manifestly inapplicable to the large unemployment in that year. But even in 1940, when unemployment stood at 7½ millions, there were no statistical signs of stagnation; at most there was a slight suggestion that the rate of expansion between successive normal years had slowed up somewhat.

Unemployment in prosperity is a phenomenon not of stagnation but of disparate rates of expansion. This may best be demonstrated by comparing the 1900-10 material with that for the 1929-41 interval. In the first decade of the century national income and productivity apparently rose at about equal rates; there was a negligible decrease in total hours worked, and this was more than offset by a modest shrinkage in the work week. The result was an increase of 3.7 per cent in workers needed (employed) per capita.

Between 1929 and 1941 the percentage increase in over-all productivity was more than twice as great as that in national income per capita. The result was that hours worked per unit of population shrank 14.8 per cent; and even a drop in weekly hours from 51.5 to 45.5 was not enough to prevent a 3 per cent decline in the percentage of the population employed. In the meantime, there was a similar rise in the percentage of the population seeking work. These two tendencies accounted about equally for an increase of 3½ million in unemployment between 1929, a boom year, and 1941, a still better year.

Unemployment caused by an over-all productivity that outstrips

total production might properly be called "general technological unemployment." It is essentially dynamic in its character, and is more of a threat under conditions of technical progress than in stagnation. We shall not here discuss the extent to which this unemployment may also be called "structural," in the sense that it arises from failure of wage rates to fall to a level that will clear the labor market. It may be observed, however, that the faster the rate of advance in productivity the more drastic would have to be the decline in the price and wage structure to maintain full employment by the automatic responses of the markets—and the more serious the consequent problems facing both business and labor.

The Results of 1946

Let us turn our attention now to the data for 1946, as they are tentatively available. Since there was only minor unemployment last year, it is evident that our arithmetical factors were in better relationship, employmentwise, than they were in the years 1940 and 1941. The detailed figures carry some surprises.

The most important point is that between 1940 and 1946 the gain in national income far outstripped the rise in productivity. This is the reverse of what happened between 1900 (or 1924) and 1940. Interestingly enough, the reversal is not due to any real slackening in the rate of increase in national productivity—just as the development of unemployment from 1924 to 1940 was not due to a serious slackening in the rate of expansion in national income.

Our national productivity figure was about 18 per cent better in 1946 than in 1940. But during the same period the manufacturing component shows a small decline in productivity; and if we take automobiles as an important subcomponent we find here an apparent decline of about 25 per cent in output per man-hour. (The latter two figures are computed from the monthly series of dollar shipments from factories, price index of manufactured goods, number employed, and average weekly hours. By a coincidence this calculation gives an actual 1946 figure for factory productivity almost identical with the C. E. D. projection made in 1945.¹)

By contrast, however, our computations show productivity increases of from 25 per cent to 35 per cent over 1940 in the important areas of agriculture, trade, railroad transportation, and mining.² It is a strange phenomenon to see manufacturing productivity lag so far behind the

¹ *American Industry Looks Ahead*, p. 46.

² May I state respectful disagreement with Ewan Clague's statement that productivity figures for trade have little meaning. (See his address, "The Facts of Productivity," December 6, 1944, New York.)

other sectors. As our chart shows, the opposite relationship held true steadily between 1900 and 1940.

Another striking fact about our 1946 data is that they correspond very closely with several of the full employment estimates for 1950. We actually registered a national income of about 165 billion dollars, a labor force of 61½ million, and total employment of 59 million. Prices, however, averaged about 10 per cent higher than the 1944 level used in these 1950 projections; hence real income and real national productivity were about 10 per cent lower than the estimates of 1950. But the 18 per cent rise in over-all productivity between 1940 and 1946 is about "on the beam" of the 35 per cent increase generally expected by 1950.

An extraordinary paradox is implicit in these figures. In over-all terms of real income and full employment 1946 was a banner year, and far exceeded anything we could dare to hope for before the war. It solved most favorably the problem of productivity's outstripping income, that created unemployment in prosperity during 1940 and 1941. However, 1946 did not bring us economic satisfaction. It has been called "a year of great economic confusion" (A. P. Sloan, Jr.), and even "a year that the locust hath eaten."³

One key to the paradox and the malaise of 1946 probably lies in the discrepancy between the lagging productivity in manufacturing lines and the brilliant production results achieved elsewhere in the economy. Manufacturing has long been the central sector of management-labor negotiations; hence the nontypical character of manufacturing results in 1946 opened the way to a mass of misunderstanding and conflict in industrial relations.

I return now to the bearing of the 1946 figures on my basic thesis that unemployment in prosperity has resulted from the outpacing of income by productivity. Was that a phenomenon only of pre-Pearl Harbor; and does the full employment of 1946 mean that from now on national income will expand at least as rapidly as national productivity? This may be so, but I greatly doubt it. There are too many reasons for believing that 1946 was a boom year, and that its favorable configuration in our analysis is destined to prove temporary. Aside from the major element of replenishment demand, we must recognize in 1946 at least five other factors characteristic of temporary booms. These are rising prices, expanding inventories, commercial loans, and installment debt; and an unusually large export balance. While nothing is certain in our dynamic history, I believe economists would do well to assume that the trends clearly recognizable over the long period

³ R. Rodgers, *Commercial and Financial Chronicle*, January 9, 1947, p. 120.

1900-40 are more likely to hold sway in the future than are the quite contrary developments of our first postwar year.

If this deduction is correct we shall again encounter grave problems in later years, growing out of that very national productivity on which we so justly pride ourselves. Not the least of our logical difficulties lies in the Janus-like character of productivity—which now enables employers and union leaders to talk past each other, with no meeting of minds. Employers insist (in the recent words of Dr. E. P. Schmidt) that “only by more production per man-hour can all workers and all persons attain a higher standard of living.”⁴ Union leaders are keenly aware that increased productivity has precipitated and may continue to precipitate “personal tragedy.”⁵ Both of these seemingly divergent viewpoints are correct. It is the task of economic statesmanship to develop an underlying philosophy and technique of employment which fully recognize both faces of the coin of productivity.

Hours of Work and Unemployment

The relationship between national productivity and unemployment is strongly affected by the three other arithmetical factors in our original equation; namely, national income, hours of work, and labor force.⁶ Our discussion to this point has centered on the relative movement of national productivity and national income. We lack time for an adequate treatment of the hours-of-work factor and the working force factor; hence we must confine ourselves to some summary statements on the subject.

Our Chart B shows that the decline in the work week between 1900 and 1940 offset a large part of the decline in total working hours needed per capita, but not all of it. There is a strong implication here that if the work week had fallen still more rapidly, the unemployment in 1940 and 1941 would have been smaller, and conversely if the work week had not fallen as much. This suggests that, instead of permitting shorter hours to work out as an accidental offset to developing unemployment, it would have been wiser to study carefully their potentialities as a planned and purposeful corrective.

We shall not attempt such a study here, beyond suggesting a basic arithmetical relationship existing between (a) an increase in per capita income or product; (b) a greater increase in production per man-hour; (c) the reduction in hours required to absorb the difference; and (d)

⁴ *Chronicle*, January 2, 1947, p. 26.

⁵ Solomon Barkin, *Chronicle*, December 12, 1946, p. 3122.

⁶ It is mathematically true, of course, that any four of the quantities determine, or “create,” the fifth. I suggest as an economic truth that the ratio of income to productivity, i.e., their relative rate of increase, is largely independent of the other three factors; and that the size of the working force is similarly independent.

the resultant hourly and weekly wages needed to yield constant unit costs. The rule is as follows: If in any period national income increases, but productivity rises faster, it is possible to reduce hours, maintain employment, hold down unit costs, and still increase the weekly pay at the same rate as the rise in per capita national product.

Assume, for example, that in a given period of years per capita income rises 12 per cent and productivity rises 20 per cent. Hourly wages can be advanced 20 per cent without increasing unit costs, but hours must be reduced $6\frac{2}{3}$ per cent to maintain employment. If both of these are done, then, even though the work week is thus shortened, the weekly pay will still increase by 12 per cent. These are average figures, and are thus subject to many practical limitations; but the basic principle is sound and useful.

The Working Force Factor

Our third chart shows that since 1929 the working force has risen persistently in ratio to weighted population. Although the percentages involved are seemingly small, they had a profound influence on the unemployment figures of 1940 and 1941. The rise in national income in 1946 not only absorbed the increased productivity since 1940 but was enough to offset a continued perverse increase in the relative labor force; and, beyond that, to cancel most of the unemployment of 1940. But on the other hand, practically all the large increase in unemployment from 1924 to 1941 was caused by the rise in the relative working force during the seventeen-year period. If we are to move back to more familiar and less favorable economic conditions, the perverse trend in the labor force may be found to be as direct and embarrassing a source of unemployment as the relative decline in the need for workers. The relationship of this factor to the responsibilities assumed in any "national full employment policy" is recommended for serious study by economists.

Generalization versus Discrimination

Our studies of national productivity since 1900, and allied data, are presented with the knowledge that they are not precisely accurate and that the over-all figures conceal many disparate components. We suggest, however, that neither of these deficiencies impairs the utility of the data, provided we limit their use to its proper area. They contribute a broad and perhaps a new insight into the changing forces affecting employment and unemployment in the past half century. The major relationships shown by the lines in our charts are not likely to be modified appreciably by any refinement of our quantities, nor would we gain in basic understanding if we broke them down into numerous components.

The use of over-all data has been sharply criticized of late, because they were put forward as the determinant of current wage policy. It is difficult to say which mistake would be greater: to base policy exclusively on over-all data, or to ignore over-all data entirely in arriving at policy. Discrimination is indeed of the essence; but this includes the discriminating use of national data. Whether we like it or not, the level of unemployment is a national datum. Its future development will be controlled inescapably by developments in national productivity, in national income, in national working force, and even in that purely arithmetical creature, the national hours-of-work.

Appendix

Source of Data Used

1. National Income in Constant Dollars. Figures for 1919-41 were supplied by the Department of Commerce, in 1939 dollars. Those for 1900-18 are based on W. I. King's material, which is used by the Department of Agriculture.

2. Gross National Product in Constant Dollars. Taken from page 37 of *Senate Hearings on S-380*.

3. Factory Productivity. Figures for 1910-41 from BLS; 1900 is my estimate; for 1946 see text.

4. Work Week. Figures for 1940, 1941, and 1946 are based on Department of Commerce data for private nonagricultural workers. (Survey of C. B., December, 1946, page 9), plus estimate of fifty-five hours for farm workers. Previous years' figures are based largely on estimates developed by Dr. Paul Douglas. Both the farm and nonfarm week in 1900 are taken at fifty-eight hours. The over-all reduction from 1900 to 1940 is 25 per cent; cf. the "round figure" of a 20 per cent reduction from 1899 to 1939 given by Fabricant, *Labor Savings in American Industry, 1900-39*, page 34.

5. Working Force and Employment. Taken from page 58 of *Senate Hearings on S-380*. The 1910 figure for working force is appreciably lower than that given in the census, but it appears more plausible.

CHART A

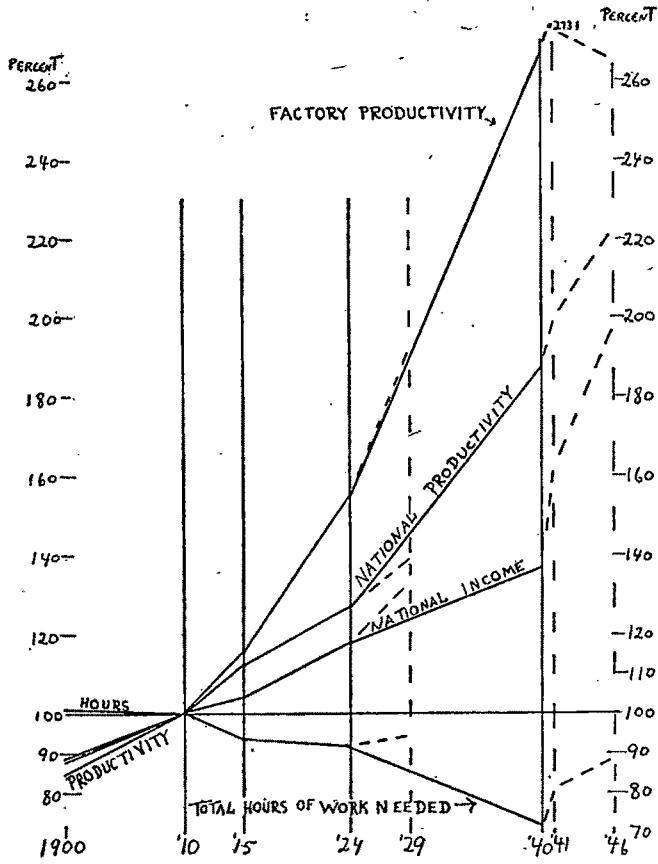


CHART B

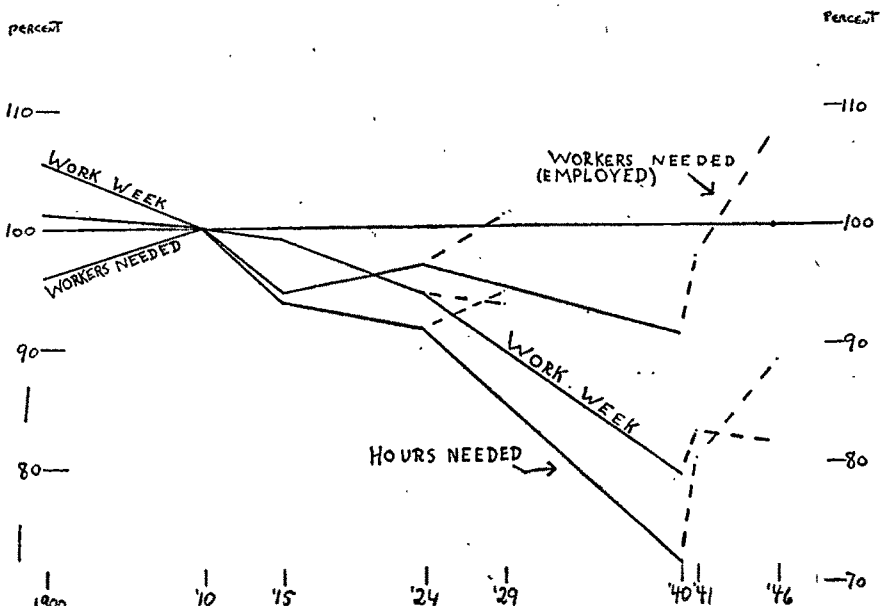


CHART C

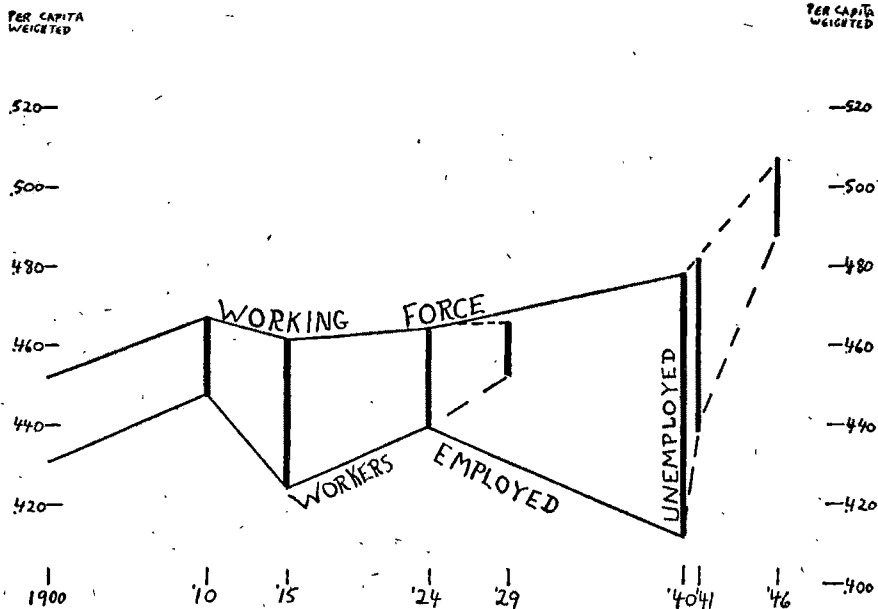


TABLE IA
VALUES FOR CHARTS A, B, AND C

	1900	1910	1915	1924	1929	1940	1941	1946
National income (1944 dollars)....	537	605	631	707	805	827	974	1199
National productivity (1944 dollars) 41.3	47.2	52.3	60.1	65.6	88.9	93.9	105.0	
Annual hours required.....	1301	1283	1206	1177	1213	921	1034	1139
Factory productivity.....	44	52	60	80.6	100	138.8	142	138
Average work week.....	58	55	54.5	52	51.5	43.5	45.5	45
Workers needed.....	.431	.448	.424	.439	.453	.412	.439	.488
Working force.....	.452	.467	.461	.464	.466	.478	.482	.507
Unemployment.....	.021	.019	.037	.025	.013	.066	.043	.019

National productivity in cents per hour; factory productivity as percentage of 1929; work week in hours. All other data are "per-capita-weighted."

TABLE IB
SUPPLEMENTARY DATA

	1900	1910	1915	1924	1929	1940	1941	1946
Population (millions).....	76.1	92.4	100.5	114.1	122.8	132.0	133.2	141.0
Population weighted (millions)	62.2	76.7	83.5	95.5	102.7	114.2	115.0	121.0
National income current dollars (billions).....	19.1	32.6	39.3	78.6	83.4	77.6	96.9	161.0 ^a
National income 1944 dollars (billions).....	33.4	46.4	52.7	67.5	82.7	94.4	112.5	145.0
Working force (millions).....	28.1	35.8	38.5	44.3	47.9	54.6	55.7	61.4
Employment (millions).....	26.8	34.4	35.4	41.9	46.5	47.1	50.7	59.1
Unemployment (millions)....	1.3	1.4	3.1	2.4	1.4	7.5	5.0	2.3
Total hours worked (billions) .	80.9	98.3	100.8	112.4	124.5	105.8	119.5	137.7
GNP ^b	544	653	651	873	990	1060	1245	1578
Productivity—GNP basis ^c	41.8	51.1	53.9	74.0	81.8	114.1	118.3	137.3

^a Less \$4 billion increased federal bond interest.^b Dollars per-capita-weighted, in 1944 dollars.^c Cents per hour.TABLE II
PERCENTAGE CHANGES BETWEEN YEARS IN FACTORS DETERMINING
EMPLOYMENT AND UNEMPLOYMENT
(All comparisons are on a "per-capita-weighted" basis, except
those for productivity and work week.)
Productivity = National Income Produced per Man-hour

	(1) 5 years 1915 vs. 1910	(2) 10 Years 1910 vs. 1900	(3) 14 Years 1924 vs. 1910	(4) 16 Years 1940 vs. 1924	(5) 30 Years 1940 vs. 1910
<i>A—Normal Year vs. Normal Year</i>					
National income.....	+ 4.3%	+12.6%	+16.9%	+17.1%	+36.8%
Productivity.....	+10.8	+14.2	+27.3	+46.1	+88.3
Total hours worked.....	— 6.0	— 1.5	— 8.5	—21.7	—28.3
Work week.....	— 1.0	— 5.2	— 5.5	—16.3	—20.9
Employment.....	— 5.1	+ 3.8	— 1.8	— 6.1	— 7.8
Working force.....	— 1.1	+ 3.1	+ 0.2	+ 3.0	+ 2.6
Unemployment.....	+95.0	— 9.0	+32.0	+164.0	+247.0
	(6) 1 Year 1941 vs. 1940	(7) 5 Years 1929 vs. 1924	(8) 17 Years 1941 vs. 1924	(9) 29 Years 1929 vs. 1900	(10) 31 Years 1941 vs. 1910
<i>B—Boom Year vs. Normal Year</i>					
National income.....	+17.7%	+13.8%	+37.8%	+50.0%	+61.0%
Productivity.....	+ 5.6	+ 9.1	+56.1	+59.0	+99.0
Total hours worked.....	+13.3	+ 3.3	—12.0	— 6.6	—19.4
Work week.....	+ 4.6	— 0.9	—12.5	—11.1	—17.2
Employment.....	+ 6.5	+ 3.0	—	+ 5.0	— 1.8
Working force.....	+ 0.9	+ 0.4	+ 3.8	+ 3.1	+ 3.4
Unemployment.....	—34.0	—48.0	+72.0	—38.0	+121.0

TABLE II (continued)

	(11) 12 Years 1941 vs. 1929	(12) 6 Years 1946 vs. 1940	(13) 17 Years 1946 vs. 1929	(14) 22 Years 1946 vs. 1924	(15) 36 Years 1946 vs. 1910
	<i>C—Boom Year vs. Boom Year</i>		<i>D—1946 vs. Previous Years</i>		
National income.....	+ 20.9%	+45.0%	+49.0%	+69.5%	+ 98.0%
Productivity.....	+ 43.1%	+18.7%	+60.2%	+75.0%	+122.8%
Total hours worked.....	— 15.5	+23.5	— 6.2	— 3.4	— 11.3
Work week.....	— 12.8	+ 3.4	—12.5	—13.3	— 17.4
Employment.....	— 3.1	+18.4	+ 7.8	+11.1	+ 8.9
Working force.....	+ 3.4	+ 6.0	+ 8.8	+ 9.2	+ 8.5
Unemployment.....	+231.0%	—71.1%	+46.0%	—24.0%	—

TABLE III
SOURCE OF INCREASED UNEMPLOYMENT
1941 AND 1940 vs. 1924

	1940 vs. 1924	1941 vs. 1924
Increase due to:		
Larger population.....	470,000	500,000
Fewer workers needed.....	3,080,000	—
More workers available.....	1,550,000	2,100,000
Total.....	5,100,000	2,600,000

(Data are based on weighted population.)

PRODUCTIVITY IN WAR AND PEACE

By JULIUS HIRSCH
New York, New York

I

When this meeting was first planned almost a year ago, its main problem seemed to be to determine whether or not the productivity of our economy has increased for good during the war and if so whether in such a degree as to threaten us with technological unemployment.

Then came the first round of the struggle for higher wages. Wage demands were based on labor's contention that productivity had greatly increased, while management argued that productivity had decreased rather than increased. Thus, it became urgent to clarify the methods used in measuring productivity. In order to do so, the Department of Labor, together with the Bureau of the Budget, held a two days' Conference on Productivity in Washington on October 28 and 29, 1946.

We hope to contribute to the valuable pioneer work done by this conference by tackling the whole problem, so to say, from the other end. The Conference started its discussions by studying the changes in productivity first at the job level, next at the plant level, then proceeded to the corporation level, and finally to the national and international level. It aimed to establish measurements of productivity which are directly based on physical volume. We feel that in this meeting the general level of the national economy should be the starting point; that the main question should be if and in what sectors of our economy productivity has increased and decreased during war and transition, and what we have to expect from the new trends which are developing. We try to approach this by dollar figures, adjusted to as uniform levels as possible to make them comparable.

It is one of the few points on which there is unanimity in economics that, in the long run, higher wages, good profits, and better standards of living are only possible on the basis of a constantly rising national productivity. The great and perhaps fateful change which has occurred is that what had formerly happened unconsciously through the working of the markets without the benefit of planning has now become a matter of reasoning. In the past decades it was the free play of the economic forces which allocated the proceeds of the increase in productivity to the Big Three: capital, labor, and consumer. Now, we are trying to substitute willful decisions for the mechanics of the markets. Because this is so, it has become necessary to measure the progress of productivity in a given period and then to determine how the proceeds of this progress have been divided among the three rather unequal partners:

capital, labor, and his anonymous misery, the consumer. This attempt will never again be given up.

II

The problem of how to measure the increase in productivity has been thrown on the economist and does not yet find him fully prepared for this momentous task. There is not even now unanimity on the question of whether our national productivity increased at all during the war, much less to what extent. If there was an increase, did it continue at the rate which we considered normal before the great depression; namely, 2 per cent a year?¹ And if we have made any real progress, can it be considered a lasting gain?

The President, in his *Economic Report* of January 8, 1947, has given a very clear and unmistakable answer to the question. He told us that we have to prepare for a 200 billion dollar a year economy instead of a 100 billion economy as in the past and, referring to 1939, said: "Even allowing for price changes, we have made such great strides forward in wealth and productivity that our thinking for the future can no longer be bound by the distant past."²

How great were, in terms of real value, these "great strides forward in wealth and productivity"? And where has the gain been achieved?

III

The Development Between 1939 and 1946. The gross national income, in 1944 prices, rose from about 112 billion dollars in 1939 to an average rate of 170 billions in 1946, or by somewhat more than 51 per cent.³ Civilian employment which had amounted to 45.3 millions in 1939 approached almost 58 millions in the last months of 1946, and was 55.4 millions on the average of that year. The nonagricultural population worked on the average one hour per week more than in 1939.⁴ If we surmise this to be true also for the agricultural sector, we find that the volume of labor within our economy increased by 24.6 per cent over these seven years and that the productivity of the average labor-hour rose by 21.8 per cent or a little more than 3.1 per cent per year. Of the 58 billion dollars by which our gross national product has grown in prices of 1944, 30.75 billions were thus created by more labor hours and 27.25 billions were the gain of an increase in productivity.

These results are in striking contrast to those of Great Britain. A report of the British counterpart to our National Planning Association,

¹ See, however, Rufus S. Tucker who puts the general increase of productivity from 1929 to 1941 at only 1.4% a year.

² *Economic Report of the President*, January 8, 1947, p. 17.

³ *Ibid.*, p. 41.

⁴ *Survey of Current Business*, December, 1946, p. 9.

the P.E.P., published three weeks ago, is definitely pessimistic. It quotes the Secretary of the (British) Industrial Management Research Association as saying: "Output per worker is of the order of 70 per cent of prewar." The P.E.P. states that in the British coal mining industry the drop is by 10 per cent; in the cotton industry by 21 per cent.⁵

In contrast, the figures given by the President are certainly encouraging. Compared with what his report calls "the remote past," namely, seven years ago, the volume of production has increased by an average of more than 7 per cent a year or almost three times the average rate between 1899 and 1929. There is certainly an increase per average labor-hour. But where did this obvious increase take place? How can we distribute the 27 billion dollars of real increase of our economic performance among the great sectors of our economy? An attempt to do this, however, runs into considerable difficulties.

1. *Agriculture*. According to a recent statement of the United States Department of Agriculture the output per agricultural worker increased by approximately 40 per cent between 1939 and 1946.⁶ This is certainly not an overstatement, even if we take into consideration that the demand for grain on the farm has partly been replaced by the demand for oil.⁷

The United States Department of Labor's figure shows an increase of only 22.2 per cent in the output per agriculture worker between 1939⁸ and 1945, while the United States Department of Commerce evaluates the increase at almost 50 per cent.

It has at various times been stated that the volume of our farm production has increased by one-third since 1939.⁹ The number of persons employed in agriculture, according to the available figures, seems to have been 10.8 millions on the average of the year 1939, 9.8 millions in 1945, and somewhat higher in 1946. This would yield an increase of well beyond 44 per cent over 1939, or an annual average of almost 6.5 per cent.

Some of the great differences in the figures of the authorities which have estimated productivity in agriculture are caused by the different way of treating such "inorganic" factors as the unusually favorable weather during seven consecutive years, the removal of restrictions on production, etc. For the purpose of obtaining comparable yardsticks of

⁵ *Planning*, January 3, 1947, No. 280.

⁶ *The Agricultural Situation* (January, 1947), p. 8; G. T. Barton, *Farm Wage Rate and Labor Efficiency*.

⁷ See also Glen T. Barton and Martin R. Cooper, *Farm Production in War and Peace* (Bureau of Agricultural Economics, December, 1946), with somewhat different results.

⁸ C. S. Golly and Allan D. Searle, "Productivity Changes since 1939," *Monthly Labor Review*, December, 1946, p. 3.

⁹ *Survey of Current Business*, October, 1946, p. 4. For 1946 the physical volume of agricultural production is put at 131% of that of 1939.

economic magnitudes, we think that physical volume and persons employed in agriculture should be compared.

Mining. If we take 1939 as 100, the index of the volume of production, according to the Federal Reserve Board, was on the average for the year 1946 equal to about 128. The number of employed persons was about 81 per cent; taking into consideration the labor-hours per week, we find an increase of productivity of 32.3 per cent in the period 1939-46, or an average yearly increase of 4.6 per cent.

For the years 1939-45 the Department of Labor states an increase in labor productivity of only 17.8 per cent which would mean that on the average of these years the increase of productivity amounted to 3 per cent a year, or almost exactly the same as in the last two decades before the war.¹⁰

Transportation. The increase in labor productivity of railroad transportation, if 1939 equals 100, was 139.5 in 1945, according to the United States Department of Labor, which means about 6.6 per cent per year during 1939 and 1943. The preliminary results for 1946 seem to indicate a lower rate; i.e., 4.75 per cent per year.¹¹

Other Public Utilities—Electricity. From 1939 to 1945 the output per man-hour has risen by 81.4 per cent, or in the average of those 6 years by 13.6 per cent.¹²

Trade. The figures which are easiest to compare are those of retailing. Retail sales amounted to 42.04 billion dollars in 1939 and were about 96 billions in 1946. An approximately correct figure for a comparison with 1939 might be arrived at if we deflate the average retail price level of 1946 by one-third. In 1946 we have then an increase of almost 22 billions in 1939 dollars over 1939.

Total average employment in retail trade was 6.21 million in 1939 and 7.8 million in 1946. The average increase in productivity over the seven years amounts thus to about 4.5 per cent.

The Great Enigma: Manufacturing Industries. We had about 10 million workers in 1939 and about 14 million on the average in 1946. The number of labor hours was about 6 per cent per week higher than in 1939.

The Federal Reserve Board estimates that the physical output per labor hour in 1946 was about 10 per cent higher than in 1939. On the average of the seven years this would yield only an increase of 1.4 per cent.

If we relate the number of labor hours to the volume of manufac-

¹⁰ *Monthly Labor Review*, December, 1946, p. 895; more detailed, p. 909.

¹¹ The Interstate Commerce Commission, *Increased Railway Rates, Fares and Charges*, December 5, 1946.

¹² *Monthly Labor Review*, December, 1946, p. 895; more detailed, p. 909.

turers' shipments we do not find any increase of productivity at all. Have the "great strides forward in productivity" as emphasized by the Presidential message of January 8 been absent in that part of our economy which in former years was foremost in the progress of productivity? As we will show later in this paper, this progress had even not subsided during the bad years of depression. Has it been discontinued during the years when the greatest investment of all times has taken place in our industrial economy? After all, production has not been exclusively in the munitions and other war industries.

A TENTATIVE TABLE: WHERE DID PRODUCTIVITY INCREASE?

	Employed Persons (in millions)		Increase in Productivity 1939-46 1939 equals 100	
	1939	1946	Total	Of Yearly Average
Agriculture	10.8	9.8	40.0	5.7
Mining	0.8	0.78	32.3	4.6
Transportation and other utilities (of this electricity)	2.9	4.0	33.3 (81.4)	4.75 (13.6)
Trade	6.5	7.8	31.5	4.5
Manufacturing industries	10.0	14.0	10.0(?)	1.4(?)
All others	14.0	19.02	?	?
Total civilian economy	45.0	55.40	21.5	3.1

This picture will be a surprise to many onlookers. It means that the increase in our productivity has taken place to an overwhelming part in agriculture, mining, transportation and retailing, wholesaling and other service trades, but only to a very minor degree in the more than one quarter of our economy which embraces the manufacturing industries. I wonder if the statistical picture will not look considerably different when the transition of our economy from a wartime to a peacetime basis has been completed. The great influx of capital and improved technique which took place in the last seven years is bound to show up.

IV

"Volume Productivity" and "Real Productivity." Labor Commissioner Clague is of the opinion that the increase of production per employee in wholesaling and retailing is of little meaning. I think it is of great meaning, but only insofar as the methods for measuring productivity are concerned. All our research before the war has shown that there was only a small, if any, increase in output per employee in thirty and probably in forty years. As late as 1941, the Harvard Busi-

ness School stated that the trend towards increased unit costs in marketing was still continuing.¹³ Now suddenly the productivity in this large business line seems to have increased by 4.5 per cent per year over seven years; that is to say, more than the average rate of increase in our total economy. The answer to this puzzle is that evidently this increase has as good as nothing to do with improved methods of selling. It is mainly a result of greater volume, of better utilization of capital and labor. What happened here has happened to varying degrees in the whole area of our economy. We must try to distinguish as sharply as possible

TABLE I
VOLUME PRODUCTIVITY AND REAL PRODUCTIVITY

Year	Gross Civilian Production	Productivity Index 1928-34 (1939=100) ^b		
	Product per Employed Civilian (1939 Dollars) ^a			
		All Manufacturing	Railroad. Transportation	Agriculture
1928	1710	72.4	73.7	91.7
1929	1770	75.5	75.1	91.5
1930	1710	77.4	75.1	89.7
1931	1680	81.0	75.6	98.9
1932	1570	78.3	73.7	93.3
1933	1610	82.9	83.0	89.1
1934	1660	86.3	83.7	76.5
1935	1740	91.0	87.6	87.5

^a Hagen and Kirkpatrick, "National Output at Full Employment," *American Economic Review*, September, 1944, p. 476.

^b Solomon Fabricant, *Employment in Manufacturing 1899-1933* (National Bureau of Economic Research).

between increase and decrease of productivity caused by larger or smaller output volume—volume productivity increase—and the increase and decrease of productivity caused by real improvement of production or organization—real productivity increase.

The trends in volume productivity are practically a direct consequence of the law of fixed costs. As the business volume rises, the unit costs decrease automatically, within certain limits; with decreasing business volume they rise automatically. What has to be defined is the part of fixed costs or fixed input in the unit output.

This is not so with the real productivity increase caused by progress in technique and/or in business organization. In many industries, this progress is especially accelerated in times of business recession.

¹³ "The cost of distribution including transportation absorbs something between 54-59% of the total cost of producing and distributing goods. . . . It costs now more to market goods than to manufacture them. Apparently, moreover, the trend still continues." (Harvard Business School, *Distribution Costs, An International Digest*, p. 1.)

The decrease of volume productivity is apparent from the figures published by Hagen and Kirkpatrick;¹⁴ also from those of Solomon Fabricant,¹⁵ though the constantly rising real productivity seems to have widely compensated the loss of volume productivity in the manufacturing industries. (See Table I.)

Progress of real productivity went on during the heaviest depression in two European countries, as the following tables will show.

TABLE II
OUTPUT VOLUME PER GERMAN WORKER 1925-35^a
(1928=100)

Year	Coal Mines	Blast Furnace Works	Cement Industry	Foot-wear Industry	Cigar Industry	Cigarette Industry
1925	79.4	76.6	75.3			
1926	90.3	87.6	89.6		122.6	105.7
1928	100.0	100.0	100.0	100.0	100.0	100.0
1929	105.6	106.8	113.4	103.7	115.4	105.6
1933	137.7	107.1	152.2	110.0	123.8	195.5
1935	139.5	—	—	112.6	138.3	235.8

^a From *Vierteljahrshefte zur Konjunkturforschung*, 11, Jahrgang, 1936 second issue, Part pp. 139-140.

TABLE III
VOLUME OF OUTPUT PER LABOR-HOUR IN VARIOUS BRANCHES OF SWEDISH INDUSTRY^a
1920-36
(1924=100)

Year	The Whole Industry	Iron and Steel Works	Cement Factories	Saw-mills	Paper Mills	Flour Mills	Tobacco Industry
1920	82	79	69	90	77	75	84
1922	100	90	92	98	93	88	93
1924	100	100	100	100	100	100	100
1926	106	108	116	105	110	97	115
1928	109	114	131	110	113	99	136
1930	116	117	162	113	120	99	147
1932	128	123	177	118	130	102	174
1934	140	142	224	130	138	98	182
1936	141	136	239	128	154	107	194

^a From *Rationaliseringsutredningens Betänkande*, Part II, Verkställda Undersökningar, p. 61.

The great depression hit the German industries from 1930 on in about the same degree as it did the industries in the United States during the same period. In the six large industries shown above, the progress of productivity did not slow down. Nor was this the case in the much

¹⁴ Hagen and Kirkpatrick, "National Output at Full Employment," *American Economic Review*, September, 1944, p. 476.

¹⁵ Solomon Fabricant, *Employment in Manufacturing 1899-1939* (New York: National Bureau of Economic Research).

younger Swedish industry, although Sweden's business had a sharp setback in 1932 (Kreuger bankruptcy).

IV

There is a great probability that the gain in volume cannot be continued indefinitely. The economic report of the President of January 8, 1947, optimistic as it is, does not promise us more than a possible additional gain in volume of, at best, 5 per cent in 1947. As we do not expect to increase our labor force beyond the 60-61 million jobs which we now have reached including the armed forces, this means that the increase of 5 per cent a year can only be achieved by a higher real productivity. If, however, the increase of our business volume should slow down—and a beginning trend toward declining prices seems to indicate this possibility—then the increase in volume production cannot go on and the increase in real productivity will again become the problem which it was in the thirties.

We can easily foresee that great new strides in technical progress will increase our production in agriculture, that the power production will progress in leaps and bounds, and that the chemical industries will greatly advance. Because of the slowing down of the volume productivity, however, the additional product which can be divided among capital, labor, and consumer becomes less, and the differences between these three are bound to become more acute.

Therefore, the demand for new economic tools for measuring changes in productivity and for distributing the results of such changes among the Big Three will press on us imperatively. The respective departments seem to have made up their minds that such new tools have to be created, irrespective of considerable expenses.

V

At What Level Should Productivity Be Measured? The Washington Conference on Productivity started by measuring the productivity on the "job level," then on the "plant level," and this has so far been the main basis on which most of our studies have been built.

Productivity increase on the job level has very often to be shared with other business as the commodity goes on its way to the consumer. The famous Hans Sachs of the *Meistersinger* was a shoemaker. Together with his apprentice, he needed two and a half days to make a pair of boots. When I visited the plant of Bata in Czechoslovakia, I was told that about six or even more pairs of shoes a day were made per employed person. Should the worker in the plant be paid fifteen to twenty times as much as the craftsman? Evidently not. Others have

to exist on the price of the shoes to make this production miracle possible; in the United States about 60-70,000 people are employed in retailing shoes and this does not include the persons who handle the wholesaling of shoes, the transportation, advertising, insurance, and banking. In addition, the price for shoes must be much cheaper than it was at Hans Sachs's time to induce the consumers to buy more pairs. Therefore, productivity results obtained at the job level have to be adjusted to and by the over-all productivity from top to bottom.

Take another case where the productivity at the job level does not mean much, but where the indirect productivity is immeasurably greater.

In a remote but fertile county a railway is being constructed. The productivity of the railway itself is nothing decisive, but it opens up the wealth of this remote county; because of the railway this wealth will double and treble in a number of years.

Often the productivity of a technical or managerial improvement does not show up fully at the job level, but clearly enough when the whole business line and adjacent industries are measured.

VI

As to the measurement of productivity and especially as to the next aims to be reached, I want to add a few remarks.

1. To measure productivity solely by the human labor-hour—as it is done almost exclusively in the English-speaking countries—gives in many cases a distorted picture. This is one of the roots of the disagreeable confusion between laborers' productivity and labor productivity.

In the Washington discussions on productivity it was proposed to add additional and especially complementary measurements to this one measurement, "human labor-hour." Of the long list I only mention here: productivity measured by units of installed horse power, by horse power hours, by kilowatt-hours. The productivity per unit of invested capital will often give valuable hints; so will a number of operating ratios already developed in trade. An example is cited in Table IV.

2. I understand and appreciate very well the great efforts which have been made to ascertain yardsticks of "physical output" as unobstructed as possible by the changing price level and by individual prices. The methods which have been used have necessarily been engineerlike. This brings very serious limitations into the studies on productivity; i.e., results can be obtained only in those large enterprises where not only a staff of engineers and especially trained other personnel is available but where records on materials, labor, and other input are available, not in dollars but in physical volume.

A long experience in various countries has taught me that these conditions exist only for a small minority of firms; i.e., for a minor segment of big industry and of transportation.

A much greater sector of the whole economy cannot be approached by such intricate measurements. Trade alone employs today four-fifths of all persons employed in manufacturing industries before the war. Small- and medium-size enterprises play a much greater role in our economy than is usually believed.

TABLE IV
A COMPLEMENTARY RATIO TO "OUTPUT PER HUMAN LABOR HOUR"
Net Output Value per Kilowatt-hour in the United Kingdom, 1935^a

<i>Heavily Mechanized Industries</i>	<i>s./d.</i>
Silk, particularly rayon.....	0/6
Textile finishing.....	0/6
Flour mills.....	0/7
Rope, twine, and network industry.....	1/2
Cotton weaving.....	1/3
Machinery industry.....	1/10
Ironware and steel furniture.....	1/11
<i>Slightly Mechanized Industries</i> (Mainly handwork)	
Cutlery.....	4/1
Silver and jewelry industry.....	4/7
Furniture.....	5/2
Toys.....	5/8
Footwear industry.....	6/6
Fur coats, ready-to-wear.....	10/6
Tailoring, dressmaking, ready-to-wear.....	11/10

^a Julius Hirsch, *Standard Figures for Industry* (Copenhagen: Copenhagen Graduate Business School Press, 1940), p. 112.

In all these enterprises, we can only get the results of normal book-keeping, but these results we have. This bookkeeping was the preferred approach in those European countries where real work on production has been done with undoubtedly great success. It has two great advantages: (a) the results can be checked over longer periods, for whole departments, and also on a firm-wide basis; (b) this method gives very quick results and can be applied to large segments of the economy. Quick work, however, may be urgently required as soon as the high tide of boom on which we are sailing recedes. Only partly developed in fields other than trade is the constant regular comparison of the main elements of costs and performance, the "mill margins" and all their components in many, or possibly all, enterprises of the same business line. This systematic comparison of business results yields a growing, valuable series of "constant figures," which the business economists in this country call "operating ratios." In Table V I add such "operating ratios" as worked out by the Harvard Business School.

These studies have shown that there is an astonishing uniformity in the most important cost elements and in the input-output relations. In some European countries they have proved not only to be a means of measuring more exactly the performance of enterprises, but of systematically improving economic performance, not only in production and transportation, but at least at some points in distribution and other services.

TABLE V
"OPERATING RATIOS" IN U. S. DEPARTMENT STORES 1925-39
(Net Sales=100%)

	Sales Per Total Employee ^a					
	1921	1925	1928	1932	1935	1939
Stores with sales of:						
Less than \$150,000 or less than \$250,000 ^c	—	\$8,500	\$8,900	\$5,700	\$6,100	\$6,170
\$1,000,000 to \$4,000,000.....	—	7,000	7,250	5,500	5,700	5,932
Over \$10,000,000.....	—	8,800	8,800	6,500	6,200	7,239
	Sales Per Square Foot ^a					
Stores with sales of:						
Less than \$150,000 or less than \$250,000 ^c	—	—	\$12.50	\$ 8.00	\$10.50	\$ 9.50
\$1,000,000 to \$4,000,000.....	—	—	19.80	12.50	14.20	15.23
Over \$10,000,000.....	—	—	29.00	16.80	18.60	18.55
	Gross Margin ^b					
Stores with sales of:						
Less than \$150,000 or less than \$250,000 ^c	25.8%	27.3%	28.1%	26.1%	30.4%	30.9%
\$1,000,000 to \$4,000,000.....	—	31.8	32.3	32.3	34.7	35.9
Over \$10,000,000.....	—	33.8	34.3	34.4	36.8	37.5

^a Cf. McNair-Teele-Hirsch, *Distribution Costs, An International Digest* (Boston: Graduate School of Business Administration, Harvard University, 1941), pp. 118-119.

^b *Ibid.*, pp. 114-115.

^c Less than \$250,000, 1925-28; less than \$150,000, 1929-39.

The regularities found in these studies were not only astonishing, but these ratios have played an important role in the competition for better forms of distribution. Take the fact that not only the gross margin of department stores but even the percentages of total sales spent on advertising were almost exactly the same in Central Europe, the three main Scandinavian countries, Western Europe, and England (see Appendix Table IX).

There is an astonishing regularity in the output per employed person in stores handling the same commodity, and such comparisons indicate where and by which means this output has increased. It indicates, month by month, the changes of volume performance.

We have for many decades used output figures in basic industries such as coal, iron, and oil. Ratios for economic performances can be added in substantial volume and be made relatively reliable indicators of progress or decline within the various business lines.

The discussions on the share of labor, capital, and the consumer in economic progress taking account of the changes in the relation between input and output will certainly start with the individual firm, perhaps with the job level.

The more the economist will be equipped to show how these changes work out in the whole business line in question and how they are interconnected with other business lines and with the over-all national productivity, the more shall we be able to discuss usefulness of the distribution of the results of our technical and economic progress so as to bring about the maximum of personal freedom.

Appendix

International Comparison of Productivity

UNITED KINGDOM

TABLE VI

WEIGHTED RESULTS OF THE "TEXTILE MISSION REPORT"
MARCH-APRIL 1944^a

(Value added per labor-hour, U.K.=100)

	U.K.	U.S.A.
Spinning.....	100	161-5
Weaving.....	100	261-70
Industry as a whole.....	100	211-20

^a *Report of the Cotton Textile Mission to the U. S. of America*, March-April, 1944 (London: Ministry of Production, 1944. Also in L. Rostas, *Economic Journal*, 1945, pp. 192-203.

TABLE VII

COMPARISON OF BRITISH AND CERTAIN CONTINENTAL COAL FIELDS^a

	Great Britain	Ruhr	Holland	Poland	U.S. ^b
Output per man-1927.....	1.03	1.11	1.00	1.17	2.12-4.52
shift (in tons) 1937.....	1.17	1.60	1.75	1.80	2.70-4.50
Average output per mine}... 1937-38 in thousand tons}	113	778	1200	600	—

^a Coal Mining, *Report of the Technical Advisory Committee*, March, 1945, cmd. 6610 (Reid Committee Report). See also A. Beecham, *Economic Journal*, 1945, pp. 206-216.

^b Added by us according to the *Statistical Abstract of the U. S. 1944-45*, p. 778. The first figure refers to production per day in the anthracite, the second in the bituminous coal mines.

OTHER INTERNATIONAL COMPARISONS

TABLE VIII

EXPENSES FOR WAGES AND MATERIALS AND THE NET OUTPUT VALUE IN SWEDISH, ENGLISH, AND AMERICAN INDUSTRIES 1926, 1934, AND 1929 RESPECTIVELY
(In % of Turnover)^a

	Wages and Salaries			Materials and Power			Net Output Value		
	Swed.	Engl.	U.S.A.	Swed.	Engl.	U.S.A.	Swed.	Engl. ^c	U.S.A.
Foodstuffs.....	10	14	10	75	68	68	25	32	32
Leather, etc.....	22	20		61	68		39	32	
Chemical industry.....	16	18		59	52		41	48	
Wooden goods ^b	27	28		57	65		43	35	
Textiles and apparel.....	25	24	23	57	63	54	43	37	46
Paper and printing.....	23	21	15	50	59	59	50	41	41
Mining and metal.....	35	28	21	43	58	57	57	42	43
All industries.....	23	26	21	55	57	55	45	43	45

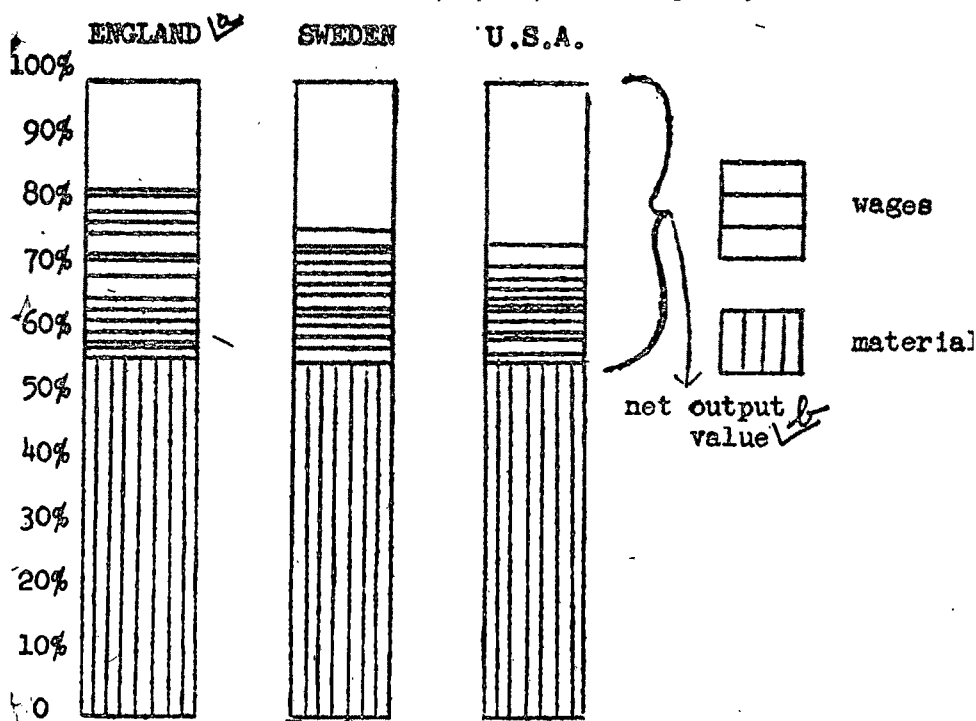
^a Julius Hirsch, *Standard Figures for Industry*, p. 22.

^b In England, sawmills.

^c Including depreciation.

GRAPH

Expenses for wages and materials, and the net output values in Swedish, English, and American industries 1926, 1934, and 1929 respectively.



^a Charles A. Bliss, *The Structure of Manufacturing Production* (New York, 1939), pp. 59, 65.

^b Including depreciation.

TABLE IX

INTERNATIONAL COMPARISON OF OPERATING RESULTS OF MEDIUM-SIZED DEPARTMENT STORES
UNITED STATES AND EUROPE
ACCORDING TO THE VOLUME OF SALES^a
(Net Sales=100%)

Millions of Dollars	England 2-5	U.S.A. 2-4	Ger- many over 4	Den- mark over 2	Switzer- land	Finland 5
Year	1936	1936	1935	1937	1937-38	1937
Gross margin	31.1%	35.8%	32.5%	31.0%	32.5%	31.1%
Salaries and wages	13.2	16.6	15.2	14.5	14.1	10.6
Rent	3.7	4.6	2.2	—	—	5.0
Advertising	3.6	3.7	—	2.5	—	0.9
Total expense (not including in- terest)	25.4	32.6	30.3	27.0	30.5	28.6
Net profit (including interest)	5.7	3.2	2.2	4.0	2.0	2.5
Sales per employee	\$4,100	\$6,075	\$5,750	\$4,000	—	\$3,000
Cash sales (% of total sales)	45.1%	44.1%	—	50.5% ^b	—	—
Stock turn	6.0	4.6	4.6	3.0	—	3.4

^a M. P. McNair, S. F. Teele, Julius Hirsch, *Distribution Costs, An International Digest* (Harvard University, 1941), p. 617.

^b Approximate.

Source: Adapted from Julius Hirsch, *Den Moderne Detailhandels Hovedproblemer* (Copenhagen, 1940), pp. 20, 21.

U.S.S.R.

TABLE X

AVERAGE REQUESTED ANNUAL RATE OF INCREASE DURING THE PERIOD OF THE
SECOND FIVE-YEAR PLAN OF THE U.S.S.R.^a

	1937 in % of 1932	
Output of all industries	16.5	632=122
% of heavy industry	18.6	752=152
“ “ timber	14.9	602=122
“ “ light industry	20.0	
“ “ supply	20.7	
“ “ tractors	323.0	
“ “ motor vehicles	837.0	
“ “ nitrates	ca. 140.0	

^a *Second Five-Year Plan* (Moscow: State Planning Commission U.S.S.R., 1936), p. 548.

TABLE XI
RUSSIAN FACTS AND AIMS 1937-60

	Factual Development ^a				Planned Development		
	1937	1938	1939	1940	1941	1950 ^b	1960 ^b
Gross output of industrial production in billion rubles (1926-27 prices).....	95.5	106.8	123.9	137.2	162.0	205.0	
Capital goods.....	55.2	62.6	73.7	83.9	103.6	157.5 ^c	
Consumer goods.....	40.3	44.2	50.2	53.6	58.4		
Coal (in million tons)....	167.9	132.9	145.9	164.6	191.0	250.0	500.0
Oil (in million tons)....	30.5	32.2		34.2	38.0	35.4	60.0
Pig iron (in million tons)....	14.5	14.6		14.9	18.0	19.5	50.0
Steel (in million tons)....	17.7	18.0		18.4	22.4	25.4	60.0

^a Al. Baykov, *The Development of the Soviet Economic System* (Cambridge, 1946), p. 291.

^b Special Supplement on the *Fourth Five-Year Plan* (Information Bulletin, Embassy of the U.S.S.R., Washington, D. C., June, 1946), p. 4-5.

^c In 1945 estimated prices.

PRODUCTIVITY AND HUMAN RELATIONS

By W. DUANE EVANS

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A technical Conference on Productivity, attended by several hundred persons from labor, industry, government, and private research agencies, was held in Washington last October. A résumé of the conference has been given elsewhere at these meetings, and a summary of the proceedings of the conference will be published in the future, so it is not necessary to discuss here the details of the conference itself.

The conference was especially successful in one important respect. The conference was made up of persons who represented the most diverse points of view and who were met to discuss a highly controversial and not well-understood subject. Yet almost without exception the discussions were informative, well-reasoned, and carried through with temperance and forbearance. It should prove most encouraging to those who hope that other public issues where differences exist may yet be settled through rational discussion. It encourages me to discuss a subject which is seldom treated except in emotional terms.

Many points of agreement and disagreement emerged from the conference, some important, others trivial. But back of the discussions seemed to lie general agreement that, however productivity is defined (and a multiplicity of possible definitions was conceded) or how accurately productivity is measured (and the imperfections of available measures received much comment), it is to the benefit of all groups to seek further improvement in productivity levels.

The real importance of higher productivity levels is, of course, obvious: with reasonably full utilization of our labor force and with hours of work fixed at socially acceptable levels, it affords the only means by which average standards of living may be raised, and the only method whereby any one group can secure additional material benefits except at the expense of others.

Many of the factors contributing to higher productivity levels have been extensively discussed and are well understood. With respect to the technical side of our economy, the benefits of fundamental as well as applied research are probably appreciated to a greater degree today than ever before. We know that new techniques of manufacture and new products require new equipment. It is generally agreed that the earnings of industry must be sufficient to attract the capital necessary for such new equipment. Furthermore, our competitive system places a real premium on technical developments which permit a manufacturer to lower costs or increase quality. We are adding constantly to our store

of technical knowledge and the current high expenditures for new plant and equipment indicate an unusually rapid improvement in the basic tools of industry.

It is clear that management bears a heavy responsibility for high productive efficiency. Initially, management must decide on the types and amounts of products which consumers will wish to buy, so that production arrangements will be neither scanty nor wasteful but will accord with the scale of the market. It is management's responsibility to integrate men, materials, and machines into a smoothly operating production flow. An extensive literature on all phases of management functions is readily available.

The aftermath of the war has placed a heavy burden on management generally. Heavy labor turnover, supply difficulties, re-equipment of factories, changes in product design and new techniques of manufacture must all be considered in relation to an industrial structure which is substantially larger than before the war. There has been heavy turnover within the management group itself. In many plants there are only a few supervisors and executives who have had earlier peacetime experience on comparable jobs. We may confidently expect that most of these burdens will be lightened with additional peacetime production experience.

Probably the bulk of the discussion with respect to productivity during the past year has not centered about machines or management, but rather about a third element—labor. Excluding the question of assignment to appropriate work, which is a management responsibility, a worker's efficiency may be considered to be determined primarily by three elements: intrinsic ability, skill acquired through experience, and effort applied to the job. It may be taken for granted, perhaps, that there has been little change in the intrinsic abilities of the working group. With respect to skill acquired through experience, however, a heavy deficit must be charged to the war. The withdrawal of workers into the armed services and their later reincorporation in the labor force, the addition to the labor force of many persons not employed before the war, and the heavy transfer of workers from job to job during and immediately after the war period have certainly lowered average experience on the job from prewar levels. However, as in the case of some management problems, we may expect continued peacetime operation to remedy this deficit.

Discussion and controversy have been especially common in the past year with respect to the third element—worker effort. Though it has seldom been expressly so stated, a number of statements have implied that on a more-or less widespread scale there has been unconscious or deliberate limitation of output by workers.

It may be recognized at the outset that concrete statistical evidence on whether worker effort has declined or not is scanty and inconclusive. Adequate data on output per man-hour are available for only a few industries, and performance varies widely between these industries. Nevertheless, in a majority of these, physical output per man-hour is above prewar levels, something which would be difficult to explain on the basis of a widespread and serious deterioration in worker efficiency. On the other hand, a number of polls of management opinion have been taken, and in all of these the prevailing opinion is that a decline has taken place. At the same time, in those polls where the question was investigated it was clear that few of the opinions were based on direct measurement. In view of the tenor of recent public discussions and the general tendency to idealize the "good old days," it is worth noting that in most of the polls a significant minority of managers reported improvements in worker efficiency over prewar levels.

Even the slight evidence which exists deals only with changes in worker efficiency from prewar levels. Certainly limitation of output by workers has existed in the past, and equally certainly it exists today. To the extent that it is practiced it can hardly be viewed as other than socially undesirable. It is not condoned by the major labor organizations and is vigorously condemned by business groups. It may be presumed that if they were polled, consumers would concur in the general opinion.

It is unfortunate that limitation of output by workers seems to be treated publicly in much the same gingerly fashion as vice. The topic is named with reluctance and then treated as a moral issue. It would seem more profitable to proceed past condemnation to causes. If the origins of limitation of output can be understood, correctives, or at least preventives, may be found.

To limit the subject, this discussion is not concerned with working rules which may be negotiated between unions and employers and embodied in union agreements. Some of these working rules are condemned by management as "feather bedding," but considered necessary by unions to protect the health and working conditions of their members. To the extent that union agreements are openly arrived at, they are subject to the modifying influence of public opinion. This discussion is concerned rather with a more spontaneous and less formal development, usually local in character and growing out of the worker's reaction to the specific industrial environment in which he is located. Evidence that the practice is not connected with the fact of a worker's membership or nonmembership in a union is afforded by the careful study of Stanley B. Mathewson, *Restriction of Output Among Un-*

organized Workers.¹ Because of its local origins, the declared policies of national labor organizations are likely to have as little effect on the practice as the declarations of public or business officials.

There seem to be three typical situations in which limitation of output by workers is most likely to develop. The first of these is in an industry or occupation where employment is erratic or seasonal in nature. In such a case, the worker may feel that his period of employment, and so his earnings, will be increased if the job is extended by limiting output. The fact is, of course, that so far as he is concerned the worker's analysis may be absolutely correct. If the worker is told that it is to the national economic interest to complete a job of work in six instead of eight weeks, he may reasonably request some guarantee that his earnings over the year will not thereby be reduced. No such guarantee, of course, exists.

Larger-scale analyses may show that the practice of limiting output to extend employment, especially if it spreads to many groups of workers, will operate to reduce rather than enhance the real earnings of the group which practices it. These large-scale studies in effect would disprove the "lump of labor" theory, but they are likely to have little effect on the worker who, within the limits of his experience, believes it works. The situation may be summarized by saying that limitation of output may arise through fear of insecurity in employment, with a footnote to the effect that the fear may be well founded.

Perhaps it is even more significant to note that the practice of output limitation may persist even when the cause which gave rise to it no longer exists. It may even be enhanced, since there is a human tendency, not confined to workers, to make a good thing of it while you can. It is the institutionalization of the practice which we should perhaps fear most. A plant manager recently told me that worker efficiency was high in some departments of his plant but low in others. He explained that materials supply in these latter departments was irregular and stated that the low efficiency was the workers' natural response to the situation. He had had experience with similar situations before the war and expressed the belief that, once the flow of work became steady, worker efficiency in these departments would rise to the level in the others.

We may conclude that a certain amount of irregularity in employment need not give rise to limitation in output. Continued irregularity, on the other hand, may lead very naturally to the practice. Once the practice has become a regular custom, it may take something more than guarantees of regular employment to eliminate it. Nevertheless, this would seem to be a prerequisite before an effective appeal can be

¹ New York: Viking Press, 1931.

made to discipline, to the competitive spirit, to the instinct of workmanship, or to the sense of social responsibility.

In the second instance, limitation of output may arise from incentive wage payment systems or from other causes related to the wage structure. This may perhaps be illustrated most clearly by the experience of some plants during the twenties. At this time, a number of "efficiency experts" discovered the stop watch and its use in setting piece-rate wage scales. These experts were convinced of the necessity for a showing of cost savings, but in some instances operated without appreciation of what the final consequences of their recommendations might be. In some cases, the result of their efforts was simply a speed-up; that is, a cut in the real wage structure such that workers could maintain their weekly earnings only by increasing their work pace. The eventual response to this might have been anticipated. Sooner or later, informal arrangements tending toward an identical level of output among groups of workers were established, either for the purpose of protecting the wage structure or to some extent for the purpose of shielding slower or less efficient fellow employees. Under these conditions, limitation of output may grow from a feeling of insecurity with respect to the wage structure.

It goes without saying that any properly trained industrial engineer today is fully aware of the worker relations problems involved in time and motion studies, and the potential danger of defeating the purposes of the work. Consequently, the simple type of development described above is not likely to reoccur, but similar problems come up today in connection with the setting of wage scales. The real problem in connection with all incentive wage systems is to convince the workers that they are getting and will continue to get a fair deal. If this conviction does not exist, some adverse response, which may take the form of output limitation, is virtually certain.

As in the case of limitation of output because of insecurity in employment, the practice, once started, tends to become a part of the institutional structure of an industry. Therefore, once it is established it may not be halted simply by eliminating the original cause. Even higher incentives or guarantees of rates over definite periods may have little effect once fixed work schedules have become the regular custom. Little response to such efforts is to be anticipated wherever the original attitude of mistrust retains a footing. It is not enough simply to convince a minority of the workers that limitation of output under incentive pay systems is not to their benefit, since effective pressures may be exerted by other workers on the nonconformist.

Occasional instances are reported where improved equipment is installed but the rate of output per hour remains the same. Such instances

provide perhaps the clearest case of limitation of output and certainly the most exasperating from the standpoint of the plant manager. These instances must be considered in relation to the expressed or unexpressed fear of insecurity with respect to either employment or earnings.

It is more difficult to describe adequately the third typical situation in which output limitation may occur, because of its close relation to other and perhaps more important problems. It may, however, be easily summarized as follows: Poor employee-company relationships affect a worker's attitude toward his job, and so create conditions in which limitation of output may arise and eventually acquire an institutional character.

At the risk of oversimplification, a possible line of development may be traced. When a worker is employed by a company, he may know little of its policies or general activities, perhaps because he has not been informed about them. His contact with the company is usually limited to his foreman and a few other minor supervisory officials. These persons may be inexperienced in their relations with him and they may be as uninformed as he. The worker knows that actions which may affect his earnings or his employment take place in the mysterious recesses of the company. From these same hidden places come rules which affect his working conditions or which attempt to regulate his working behavior. These rules may appear to him wholly arbitrary in nature. Eventually, in the absence of contrary influences, the worker may come to personify the company as a distinct but alien entity, with interests which may be counter to his own. Our common use of the words "company" and "management" actually favors this tendency, since we frequently speak of them as if they were separate entities with personalities of their own, instead of complex organisms embracing many movements and cross-currents.

Once this stage is reached, it seems quite natural to the worker to ignore and even circumvent working rules wherever possible. It is only one further step to the feeling that it is pointless, and indeed foolish, to exert any special effort which will, so far as the worker sees, mean only "more profit for the company." In this soil, limitation of output is a natural growth.

The principal oversimplification in the above description is the implicit assumption that a worker's attitudes may be determined primarily by his own experience. A new worker is probably influenced most importantly by the attitudes of fellow workers. These in turn have their roots in the whole line of development of industrial relations in the United States. The implications of this cannot be fully examined here. It is sufficient to point out the connection with the question of limitation of output.

The type of attitude with which we are concerned might be illustrated in many ways, but the following will serve. Virtually every metal-working shop in Detroit boasts of some legendary figure, once an employee, who "borrowed" or "liberated" enough parts from the places where he worked to build himself a complete automobile. The story of this modern Robin Hood is amusing, but the attitudes behind the story deserve serious attention.

During the war period, I had an opportunity to visit many plants, each doing substantially the same job and faced with similar problems. Actual production in relation to the numbers of workers employed differed widely from one plant to another. Material reasons for these differences being lacking, they were usually ascribed to differences in worker morale. This convenient heading, however, simply begged the question. Further analysis usually developed that in the more effective plants the workers felt that they were an active and individually recognized part of an organization which was doing a useful job. In other words, a community of interest which stretched throughout the organization had been built up.

We have here two contrasting situations, but the polarity should occasion no surprise. The relationship existing between a worker and the company employing him is not likely to remain neutral in character. If a community of interest cannot be built up, it is likely that a feeling of opposition in interests will develop. In this latter situation, limitation of output is only one of the undesirable potential consequences.

The development of a community of interest between worker and company is important in itself, and it may act as a preventive with respect to limitation of output. However, as in the other type situations considered, the mere absence of poor worker-company relations is not in itself sufficient to eliminate limitation of output once it has acquired an institutional character. This requires something additional. Nor should it be expected that efforts to eliminate output restriction will bear immediate fruit. Customs develop slowly and they change slowly.

It may be noted that worker-company relations may be either good or bad in the presence or in the absence of collective bargaining. Nevertheless, it should be one of the objectives of collective bargaining, from both sides of the table, to promote good worker-company relationships. It is also evident that good relations cannot be wholly the result of unilateral action.

It is undeniable that in a real sense there is a very substantial identity of interest between a worker and the company employing him. A sense of relative economic security or attachment to a definite point in the social and economic structure is highly important to most workers. In our competitive system, an unprofitable enterprise, which is to say

an inefficient enterprise, is one in which every worker's employment and earnings are insecure. Furthermore, in this respect there is little difference in interest between the unskilled worker and the company executive. There may be a gradation of interest, but little difference in kind. It would seem, therefore, that a broad foundation of economic self-interest exists for a co-operative effort to insure high efficiency within an enterprise.

So far as the worker is concerned, however, these facts may be obscured by other considerations. The worker is likely to feel that his continued employment and advancement depend less on the company's fortunes than on the decisions of persons within the management group who are largely unknown to him. It is these persons that he largely identifies in his mind as the management or the company. If the worker comes to feel that the company, this alien entity, may take actions which are incompatible with his own interests or that it may act toward him in a wholly arbitrary fashion, he is definitely insecure in his principal economic relationship with society. This sense of insecurity has far-reaching implications with respect to society as a whole, transcending in importance the question of limitation of output by workers. With respect to these broader problems, the studies of Elton Mayo and his associates should receive the widest attention.²

The fact that in some organizations it has been possible to create a real community of interest between the persons at all levels making up the organization is a clear indication that success may be achieved in other cases. From almost any point of view, it is clear that the most strenuous efforts to attain success are justified. At the same time, with a reasonable amount of patience and good will, strenuous efforts may not be required. Along these lines, a special interim report just issued by the Committee on Human Relations in Industry of the University of Chicago describes an unusually interesting case of the conversion of conflict to co-operation in a specific company.³

The possibilities for further technical and material improvements are constantly appraised at all levels of our industrial structure. Time and motion studies assist in making operations more efficient at the job level. Production control systems help to eliminate waste of time and materials. Great research laboratories steadily enlarge the foundations of material knowledge and develop new industrial techniques. The assistance of consumers themselves is enlisted by marketing research specialists to appraise potential markets and to discover desired improvements in product design. On the human relations side, how-

² See especially Elton Mayo, *The Social Problems of an Industrial Civilization* (Harvard University Press, 1945).

³ *Applied Anthropology*, Vol. 5 (1946), No. 4.

ever, our activities seem less well diffused through the economic system. It is true that many of our universities have industrial and human relations institutes and departments where the problems of human organization receive the serious and objective study they deserve. Nevertheless, it is a common observation that the industrial relations departments of many of our labor and business units are instruments for defense rather than for co-operation.

The above discussion may seem only casually related to economics, as that term usually is understood. However, if we define economics as the study of all factors, including human behavior, which affect the satisfaction of human desires through material means, the connection is more evident. It is suggested that many of these aspects of social behavior are perhaps even more important than some of the technical and material factors which are more extensively discussed.

Output restriction by workers has its origins largely in the insecurities and uncertainties of modern economic life—in circumstances created by the industrial system itself. It will not be reduced by any approach which begins and ends with the notion that it represents simply irresponsible conduct. Rather, what is required is an appreciation of the very real personal and economic problems which may give rise to the practice, and a sincere and continuing effort to help workers solve these problems. Some of the difficulties involved, such as employment regularity, are national in scope, but others must be met primarily at the plant and local organization level. Society in general and management in particular bear a responsibility for initiating a rational and co-operative approach to the problem of output limitation.

DISCUSSION

CARTER GOODRICH: Mr. Graham has presented an interesting arithmetic identity which displays certain elements of the problem of the relation of productivity to employment. Like other such identities, it does not of itself indicate on which of the variables we should attempt to operate. It does not tell us whether, for example, we should try to affect the total product or the hours of labor or even the rate of productivity itself. I am sure that Mr. Shishkin will agree that there is nothing new to the labor movement in the suggestion to reduce hours of labor as a remedy for unemployment, technological or other. The proposal still remains open to the familiar question. Shorter hours as chosen leisure and as one of the best means of taking advantage of increased productivity should be sharply distinguished from shorter hours as an expedient adapted because we cannot devise any way of bringing about the desired increase of national income.

Mr. Hirsch has brought into the discussion a most useful distinction between "volume productivity" on the one hand, which depends on changes in the load factor, and what he calls "real productivity"—perhaps better "technical productivity"—on the other. This he illustrates most effectively from retail trade. Obviously the best of salesgirls cannot be very productive if there are no customers in front of the counter and no goods behind it.

Mr. Garfield emphasizes the distinction between labor productivity, production divided by man-hours, and the laborer's personal efficiency, depending on the skill, training, and effort of the workers themselves. It is to the latter of these problems that Mr. Evans has directed his attention. He makes a series of thoughtful recommendations for increasing the worker's productivity; I am glad that Mr. Shishkin has added to these the possibility of appeal to the union group. It is interesting also to note that Mr. Evans' statement draws attention to the ways in which the solution of this problem depends on the solution of the problem of volume productivity.

The distinction between labor productivity and personal efficiency indicates that there is no easy formula for distributing the gains. An increase in production per man-hour may be due to changes "in men, management, and machines" in the particular industry or to changes in the health of the entire economy. Who then should receive the gains? There is no single and automatic answer. Surely we want the principal gains of increased productivity to go to the masses of the people. How much should go by increased wages and how much by low prices—the economist's traditional preference—are questions to be determined. The answer will depend partly on our judgment as to what disposition of the income will best serve to keep up "volume productivity" and as to what disposition of the income will best serve to give us the kind of society we want. I take it that this is what Professor Clark had in mind in his reference to the "optimum share" of labor.

The Chairman remarked that these things are becoming more and more matters of "willful decision." For that there are many reasons. One, I think, lies close to the basis of the present meeting.—I believe that the future his-

torian of the economic mind, in judging the work of economists of this generation and its impact on public policy, will lay great stress on the development of such measures as those we have been discussing. The figures of productivity, those of national income or production from which they are derived, the measure of unemployment, the extraordinarily promising figures of money flow which Morris Copeland has brought to these meetings—are all measure of *the performance of the economy*. These are important not merely for knowledge but also for attitude and for policy. If we become accustomed to measuring the performance of the economy we shall be less tempted to regard it as mysterious and sacrosanct. We shall be more ready to control it and able to do so with greater chances of success.

TRANSPORTATION AND PUBLIC UTILITIES PROBLEMS

THE TIME ELEMENT IN TRANSPORTATION

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Since transportation is a means to an end, the demand for it is a derived demand. This fact has significance because the nature of the demand for transportation is conditioned by trading operations which develop as a result of underlying economic factors at any given time. The nature of the demand for transportation is derived from the nature of the commercial transactions involving transport services. In some respects the causal connection works both ways; i.e., the nature of the transportation services available affect the character of commercial transactions carried on.

The formula of weight \times distance, however, commonly used to measure the transportation service performed is inaccurate and leads to a misconception as to the true nature of the service, for transportation takes place through time as well as through space. This time element has been largely neglected in theoretical considerations in spite of a very lively interest on the part of businessmen.

The purpose of the present analysis is to consider whether time (i.e., speed) has economic significance apart from the other factors such as availability, dependability, and cost which can be separated out and measured independently. The answer to this question must include an explanation of the reason why the speed of transport has economic significance, which involves an analysis of the nature of the demand for it. It will be necessary, also, to explain how the economic importance of time or speed is made evident. This will involve examination of the relationship between the element of time and the other factors in transportation, primarily cost. The present analysis is based chiefly on prewar data, since relationships during the war period were obviously abnormal and the postwar situation has been characteristically unsettled. The treatment will be from the standpoint of the producer as well as the user of transportation because in certain respects the impact of time is not the same for both. The problem has many facets, and it is obviously impossible to cover all these phases in a paper of this length. The relation of the time factor to goods destined for storage and to economic rent has been treated elsewhere and is therefore omitted from the present discussion. The effect of

the speed of transport on the location of industries has also been omitted.¹

In discussions of the relation of industrial progress to the development of transportation facilities it is customary to point out that transportation is the vital link in the mechanism of distribution and exchange; that geographical division of labor and large-scale production are possible only as transportation is developed to a point of reasonable efficiency and relatively low cost; and that efficient transportation of persons also is essential to large-scale production if we are to avoid dangerous concentrations of population. In these discussions of the economic significance of transportation, however, the primary emphasis has been placed on cost. A great deal has been written on rates as related to cost. But the relation of cost to the element of time has never been analyzed. Yet production, distribution, including transportation and consumption, all take time. There is presumably some difference between a transportation service which requires four days to move goods a distance of four hundred miles and one which moves the same goods the same distance in that many hours. In the traditional analyses of transportation problems serious consideration has never been given to the disposition on the part of the public, as suggested by one observer, to measure distance in minutes rather than miles. The question to be considered here is whether the economic significance of time can be measured apart from the other components of weight and distance.

The Value of Time to the User of Transport

As already noted, not only commercial transactions but human activity generally is completely conditioned by the element of time. Some of the most fundamental economic concepts can only be realized with the passage of time. Wages, interest, rent, and taxes are paid in the course of time. That time has value in the economic sense to the user of transportation therefore would seem to need no particular demonstration at this juncture. What is of interest for the moment is the nature of the impact of this value which is placed upon time on the conduct of transportation.

Economic or commercial activity results from the effort to satisfy human wants, and the distributive agencies, including transportation, serve to connect production with consumption. The time in transit, therefore, may be considered as a period of suspended satisfactions (except in the case of travelers for pleasure). The desire to shorten

¹ Cf. Herbert Ashton, *An Economic Analysis of the Element of Speed in Transportation* (Doctoral Dissertation, Harvard University, 1936).

this time in transit, therefore, follows logically. If the rate of flow of goods from producer to consumer is not commensurate with the rate of production, there will result a bogging down of the productive process. Similarly, failure of the rate of transportation to keep pace with the rate of consumption would create a shortage of supply with disorganization of the exchange mechanism. It is essential to point out at the start that in ordinary commercial transactions the value placed upon time is not constant. It may be nearly so in connection with certain activities such as credit transactions and tax payments; but in many other activities, particularly those of a discontinuous nature, the value of time may vary widely and more or less suddenly depending upon circumstances. Many kinds of enterprise are carried on throughout the twenty-four hours of the day, but this is by no means universal. It is still true that the majority of commercial transactions are limited to the hours of daylight. Therefore, although the value of an hour of daylight may be the same as an hour of darkness to the carrier, it is not the same to the patron of the carrier. Between the hours of 6:00 P.M. and 6:00 A.M. the value of an hour more or less of the time in transit of his goods may drop to practically zero. But his whole operation may be delayed if his consignment is not at hand by the time he is ready to commence his day's business. There is here no delicate shading off in the value of time such as is pictured by the law of diminishing returns, but a sharp line of cleavage, different for different business units, yet distinct in each case. This is equally true in the transportation of persons. So long as the time saved in transit can be capitalized in the conduct of the day's business it has a distinct value; but after the end of the business day the value of any unit of time will be altogether different. This situation is recognized by the carriers in their efforts to place consignments for unloading before commencement of the business day. The utilization of commercially unproductive hours for transportation has the effect of reducing what might be termed the "constructive" time in transit apart from any variation in the actual speed of movement.

Commodity Movements and the Time Factor

The limit of time in transit and the speed necessary to reach a given market varies as between different commodities. In the top class of commodity which demand the shortest time in transit come those perishable goods whose delicacy is such that deterioration sets in at an early stage thus materially affecting their value. The allowable interval of time between their production and consumption is short. The most rapid movement of such goods is therefore essential. Ac-

cordingly particular transportation facilities have been developed to expedite their movement. The distance they can be hauled is directly affected by this time limitation. Certain fish, for example, which are indigenous to the Atlantic seaboard, such as Delaware river shad, are not generally available to consumers living in the Middle West, because the fish tend to spoil in the time required for the movement. Livestock are being moved to market increasingly by motor truck instead of railroad. Livestock lose weight on the way from the feeding grounds to the slaughter houses. This deterioration is a function of the time in transit. The movement to market by truck is not because of a saving in the transportation cost, for the truck rates are frequently higher than the rail rates. It is because of the saving afforded in the time in transit. In the case of milk, legal restrictions provide a definite age beyond which the milk cannot be sold to consumers for beverage purposes. This limit varies somewhat in different cities but the nature of the limitation is essentially the same. Consequently the distance from which a metropolitan area can draw its milk supply depends upon the speed of transportation provided. The time element sets the pattern of the transportation service. The rates charged generally reflect the cost of providing the speed required. They are accordingly regularly higher than for ordinary freight movements.

The quality of perishability as a factor affecting the time in transit, however, inheres not only in the goods to be transported but also frequently in the demand for goods. We have both perishable goods and perishable markets in which the demand is transient in nature. The demand for bituminous coal is relatively steady the year round. A supplier may provide a community or industry with fuel at the rate of a certain number of tons per week, which can be accomplished by a relatively slow but steady movement to market so as to provide the necessary volume day by day at the market. From the standpoint of the consumer it would make no difference how long the fuel was on the way so long as it arrived in the regular daily allotments. It might be moved at a speed of ten miles per hour for a distance of 2,000 miles, thus requiring between eight and nine days to make the run. If the shipments were started sufficiently in advance of the date due at destination the consumer's supply would be kept intact. The situation would be different, however, if the demand were of short duration and created suddenly, as when a large ship entered port for supplies and refueling. If the ship's stay in port were limited to one week this market would be completely cut off for a supplier 2,000 miles away at the above speed of transport, unless he were able to maintain a storage supply at this port, or within reach, which would

add to his cost. At a speed of twenty-five miles per hour, however, this shipper would have ample time to get his consignment delivered and loaded without delaying the vessel.

The importance of the rate of movement of goods will be affected by the period of consumption as well as the duration of the market. The period of consumption for edibles is short; market operations therefore are on a day-to-day basis. Commodities entering such markets regularly demand high speed transport. An instance of perishable demand which is not without some importance, perhaps, is in the marketing of various gadgets, victuals, etc., at football games or other sports events. Goods to be sold in such a market secure a premium price, but their arrival must be carefully timed to meet the demand when it is ripe.

The character of transportation required will be affected also by the size of the market or rate of flow of commodities to it. A comparison of the potentialities of surface and air transport will illustrate the particular impact of high speed versus bulk capacity when demand and supply are essentially fluid in character, a situation which is frequently encountered in commercial transactions. An excellent illustration of this effect of the character of demand and supply is given by the Naval Air Transport Service in the evacuation of sick and wounded from Okinawa. During two and a half months the evacuation squadron handled a total of 9,871 patients in 329 round trips, flying 1,248,800 plane-miles. Into Okinawa these planes carried over 2 million pounds of urgently needed cargo including more than 15 thousand 81 mm. mortar shells. The distance from Okinawa to Guam, the location of the base hospital, is 1,400 miles. One hospital ship of the type used in this area can carry 550 patients over this route in five days. It requires a total of four days to load and unload the ship, making a total average elapsed time per patient of seven days. Three planes, with a capacity of 30 patients each, can carry the same number of patients over this route in the same number of days, each plane making the flight in seven to eight hours. The actual rate of receipt of wounded at the beach is not available, but it may be assumed as approximately 135 per day, so that the ship would be able to complete its load in minimum time. It required one and one-half hours to load and unload each plane. Five round trips per day would care for the wounded, and the total elapsed time per patient would be in the neighborhood of twelve hours, compared with seven days via ship, to get to the base hospital. The adjustment of stocks by the big merchandising houses in such centers as New York and Philadelphia provide a similar flow of traffic in more or less continuous, small increments on short notice and at high speed. These

movements are normally made overnight by truck on orders placed the day before by telephone.

The speed of transport demanded tends to vary inversely with the extent of the market and supply areas. The demand for fast transport varies also with the length of haul. As the length of haul increases, the time in transit increases, and the funds thus tied up provide the basis of the demand for reducing the time in transit to a minimum.

Sources of Gain from Increased Speed of Transportation

The discussion so far has been largely hypothetical in character. It is important therefore to provide evidence of a more concrete nature with respect to the impact of the time factor in transport. There are eight sources of gain to the user of transportation resulting directly from reduction of the time in transit of his goods. These may be enumerated as follows: (1) reduction of inventories; (2) reduction of capital frozen in transit; (3) reduction of distribution costs; (4) widening of market areas; (5) widening of sources of supply; (6) improved control over supply and price; (7) more effective management control; (8) improved turnover of stocks. Consider these briefly in the order named.

1. The greatest benefit to shippers generally from increased speed of transport, and which the shippers themselves widely proclaim, is the reduction in inventories made possible. The actual amount of this saving varies widely, of course, with different industries. (It has been calculated that the annual cost of carrying stocks of various kinds averages approximately 25 per cent of the investment in them, which must be added to the cost of the inventories themselves.) Testimony received from a large number of shippers indicated that during the period between 1922 and 1929 when the railroads put into effect their program of improved services, reductions were effected in inventories ranging from 25 per cent to 75 per cent. The (unweighted) average reduction was 40 per cent. In some cases these reductions were accompanied by increases in sales of nearly 300 per cent. That these savings were due in part to increased general efficiency in the conduct of these enterprises cannot be denied; but the testimony of the shippers gave substantial credit to the improved speed of transportation. The practice of hand-to-mouth buying, which spread rapidly during that period and which is continuing today, is based fundamentally on the ability to replenish stocks rapidly as needed through the availability of fast transport service.

2. The reduction of capital frozen in transit as a result of increased speed of movement will vary directly with the distance or length of haul involved. For short hauls a considerable change in speed

of transport would have little or no effect. Testimony of shippers, however, is again available as to savings effected in this respect from increased transportation speed. It is sufficiently obvious, perhaps, as to need no demonstration.

3. Reduction in distribution costs is brought about not only through the capital savings noted already but also more directly by reducing the transportation cost itself in many cases. As long as transportation by ordinary freight service remains slow, many commodities, such as perishables and style goods, must be shipped via express to avoid the danger of loss peculiar to such articles arising out of delays in transit. A sufficient increase in the speed of ordinary freight movement, however, has enabled a reduction in the cost of distributing such articles directly through the lower rates paid. The representatives of certain producers of shoes have testified to this effect.

4. In the case of certain perishables particularly, the widening of market areas results directly from increased speed of transport. Shrimp caught in the Gulf of Mexico are carried by plane to the mainland and are thus enabled to reach markets as far distant as St. Louis within twenty-four hours of the time gathered. Milk, the age of which for beverage purposes is limited by law, can reach markets over increasing distances as the speed of transport increases.

5. The widening of the sources of supply is the obverse of the effect of high speed transport in widening potential markets. The distribution of milk to our large metropolitan populations is obviously a case in point. In the case of more durable goods a lowering of the cost of transport would produce the same result; but the effect of a reduction of the time in transit is independent of the effect of reduced rates, and would exist even in spite of an increase in rates, within limits.

6. The increased mobility of the consumer resulting from faster transport also provides this improved control over price by widening the accessible market areas. The increased mobility of the worker, too, tends to stabilize wages over increasing areas.

7. Centralized business control in these days of large-scale enterprises is directly related to the rapidity with which directives, and the directors themselves frequently, can reach outlying plants or offices. Hay, in his *Economics of Air Transport*, cites the fact that approximately 80 per cent of airline passenger traffic before the war consisted of business executives.²

8. The increased rate of turnover of the stocks of retail merchants results from the reduction in inventories made possible by faster transport service noted earlier. Smaller stocks being required, they are turned over more rapidly. Again the testimony of merchants is

²T. P. Hay, *Economics of Air Transport* (U. S. Air Service, September, 1932).

available in substantiation of this assertion, though scarcely required. These various sources of gain to the user of transportation stem directly from the saving in time that results from increasing the speed of transport services.

Evaluation of the Time Factor

A measure of the value of time may be secured by comparing the price paid by the users of different agencies of transport for services which are similar except for differences in the time consumed in transit. Any differential in the rates which obtain via different agencies of transport between the same points might be considered to measure the value of the time saved by the faster service. If shippers or passengers are willing to pay more for fast transportation than for slow transport, the amount of the differential will constitute a measure of the value placed upon the corresponding difference in time required for the run. To test this hypothesis a comparison was made of the duration of runs and respective charges for a list of runs by bus and by railroad between the same cities in New York State. For fourteen such runs of moderate length it was found that the ratio of the duration of run by bus to that by railroad was 1.530:1 and for these same runs the ratio of fares charged by railroad to those by bus was 1.480:1.

There is suggested here an approach to a constant relation between the relative time consumed by the different transportation media and the charges paid indicating an evaluation of the time element of a more or less objective nature. Such a relation might be generalized as follows: let a be the duration of run by rail, and b be the duration of run by bus, and let x be the fare by rail and y be the fare by bus,

then $\frac{a}{b} = \frac{y}{x}$ or $ax = by$.

To provide a concrete example: if, in the formula above we let $a = 18$ and $b = 32$, the duration of the run in hours between New York and Chicago by rail and bus, respectively, at the time this comparison was made; then if the fare by rail is \$32.00, that actually charged, the bus fare should be \$18.00 which it actually was at that time. The differential in the time consumed in transit was equal to the differential in the fare charged. Similarly, the fare by railroad, at the time these comparisons were made, between New York and Philadelphia was \$3.24 and the time consumed in transit was 1.75 hours; by bus the fare was \$2.00 and the time consumed was 2.85 hours. The ratio of fares charged is almost identical with the inverse ratio of time consumed. The value of the time saved between New

York and Philadelphia is at the rate of \$1.25 an hour. In the case of the run between New York and Chicago the value of an hour saved was approximately \$1.51.

To test this hypothesis further some twenty-seven runs of varying lengths scattered over the entire country were compared with respect to duration of run and fare charged by bus, rail, and air transport, respectively. With regard to the comparison between bus and rail movements, a reasonably constant relationship was indicated for runs of moderate length which tended to be destroyed, however, for the longer runs. This was particularly true in comparing air transport with rail, where the relative saving in time is much greater than the excess fare, especially on the longer runs.

Similarly, for twelve runs out of New York City of various lengths, the average of the ratios of the fare by rail to the fare by bus was identical with the average of the ratios of the time in transit by bus to the time in transit by rail.³ These average ratios were 1.5 to 1.0. It will be noted that this figure is practically the same as that obtained in the sample of twenty-seven runs of various lengths spread over the entire country mentioned earlier. If these samples can be taken as indicative of a more general relationship, then it is possible to construct a curve relating time to cost, which would constitute a kind of supply curve and coincident demand curve for speed. The manner in which this relationship breaks down for the higher ranges of speed obtained by air transport and particularly for the longer runs tends to bear out the form of the demand curve shown in the following diagram (to be discussed later). For the twelve runs out of New York mentioned earlier, the ratio of cost by air to cost by rail is almost identical with the ratio of rail fares to bus fares; but the time by air is less than that by rail to a much more substantial degree, indicating the increase in elasticity of the demand with increasing speed as depicted in the diagram. The equality of ratios between costs and the inverse of times consumed for the various runs examined indicates a demand curve with a constant slope over this range of operations; i.e., variations in charges coincide with equal proportionate variations in the time in transit.

We have here in the case of passenger transport evidence not only of the significance of the time element but also, for the samples taken, a concrete measure of that significance. Is the situation similar in the case of commodity movements? Several freight runs out of Philadelphia to the South by rail and water were compared which developed a similar correspondence between the ratios of duration of run and freight charge, though the agreement was not as close

³ See Appendix, Table I.

as in the case of the passenger runs examined. A three-way comparison has also been made for a small random sample of long hauls between duration of run and cost via rail freight, railway express, and air freight.⁴ The ratios are again close for the two types of rail service although on a somewhat higher level than in the case of passenger service. When the rail services are compared with air freight, however, the relationship in the case of the surface carriers does not carry over to air transport.

In view of the amount of variation in the relationship which is indicated by the data here, particularly when the run assumes any appreciable length, the support offered for the hypothesis of a constant or objective value of the time in transit is not convincing. This was to be expected, however, because of the complexity of the relationships and multiplicity of factors involved as well as the fact that time is not of constant value to the users of transportation. The value placed upon time is related to circumstances.

Sufficient evidence has been adduced it is believed, however, to demonstrate that the element of time in transportation does have economic significance, and that some measure of this significance is possible. The fact that the value placed upon time by the user of transportation varies does not affect the validity of the proposition that it has value in the economic sense. The manifestations of this significance are varied, depending in part upon the time of day and the season of the year. They also are related to the nature of the traffic to be transported. The importance of the time element is derived from the nature of the goods transported, but more fundamentally from the perishable nature of the demand in many cases and the necessity of establishing a mechanism of exchange which will reduce to a minimum the interval between the time when wants are first felt and their satisfaction. Much of the cost of distribution today results directly from the time required to provide it.

The Time Factor and the Producer of Transportation

In the discussion thus far the element of time has been dealt with largely from the standpoint of the user of transportation. With respect to the agency providing transport service, without seeming to labor the obvious, it may be pointed out that a large proportion of the costs of conducting transportation vary directly with time. A great deal of the cost of maintaining the fixed facilities of any agency of transport and even of the rolling stock is a function of time. Therefore the more service that can be performed per unit of time the lower will these

⁴ See Appendix, Table II.

costs become per unit of traffic transported. This result can be attained by either of two means as noted earlier; namely, increasing the load carried or increasing the speed of movement. Both of these methods affect the cost of providing the service. An increase in the weight of the load requires an increase in the power applied to move it. Similarly, an increase in the speed at which a given load is moved requires an increase in the power applied. Which of these means will be the more effective will depend upon the circumstances in any given case. They both have been used regularly by all agencies of transport. Why increasing the speed of movement has been used at all is the question of interest here, particularly in view of the suggestion that increasing the speed tends to increase the cost by requiring the application of more power. That this is not always the case, however, can be demonstrated historically. One or two instances only need be given by way of illustration. Meyer, in his *History of Transportation in the United States*, states that in 1794 it required twenty to twenty-four days to move freight a distance of three hundred miles; and the cost averaged \$5.00 per hundredweight. By 1832 the time for this trip had been reduced by more than half and the cost proportionately.⁵ Since transport over land in those days was by horse-drawn vehicle, the horses as well as the driver had to be fed each day and otherwise cared for so that a reduction in the number of days enroute reduced these costs for the journey. The elements of cost that are a function of time have changed with the changing technology in the industry, but continue to offer an incentive to the agency of transport to increase the speed of operation. There are other elements of cost, however, which increase as the speed is increased, as already mentioned. The application of increasing increments of power to provide higher speed becomes more and more costly as the speed increases. Moreover, this element of cost increases not directly with the increase in speed but as the square, or in some cases, the cube of the speed. The increase in these elements of cost normally overbalances the reduction in other elements of cost noted for the higher speeds so that the net effect is an increase in the cost of providing the service as the speed is increased beyond some optimum point for any given stage of technology. It is possible, therefore, to construct a cost curve in the economic sense for speed of transport by keeping the load constant or nearly so and plotting the cost of providing transport by any given agency at different speeds. This curve has the traditional characteristic of decreasing cost as the speed increases from very low values to the optimum point where

⁵ B. H. Meyer, *History of Transportation in the United States before 1860* (Carnegie Institute, 1917), p. 80.

the unit cost is a minimum beyond which the cost increases with further increases in the speed. The derivation of this cost curve of speed has been made elsewhere for several media of transport and therefore need not be repeated here.⁶

In short, the cost of providing transportation is not constant. It varies, not only as between different media, but also for any given medium due to the impact of the element of time. It is proposed now to consider certain general effects of variations in the speed of transportation in the light of established supply and demand relationships.

If according to the traditional concept ton-miles or passenger-miles constitute the product of the transportation agencies, then it may be argued that different speeds merely represent different rates of production, but not different products. It is submitted, however, that there is a qualitative difference between high-speed transport and transport at low speed, which is distinct from the effect on volume.

In the traditional analysis of the exchange of transportation certain assumptions have been made in establishing the theoretical relations of supply, demand, and cost, as well as in applying these relations to the facts. The relation between costs and volume of traffic in connection with the condition of unused capacity and its effect on rates has generally been considered on the assumption of some common unvarying rate of movement. The extent of the unused capacity, however, is itself a function of the speed at which operations are carried on. The capacity of the transportation system of the country was increased during the past war to a considerable degree by improving the turn-around time of the rolling stock entirely apart from any extensions of facilities.

It can be readily calculated that reducing the turn-around time of railroad freight cars by one day, say, from fourteen to thirteen days, with an active car supply of 1,900,000 cars is equivalent to adding 146,000 cars to the supply. This matter of the utilization of equipment was kept under scrutiny by the ODT throughout the war with the view of increasing the capacity of the railroads by all the means available.

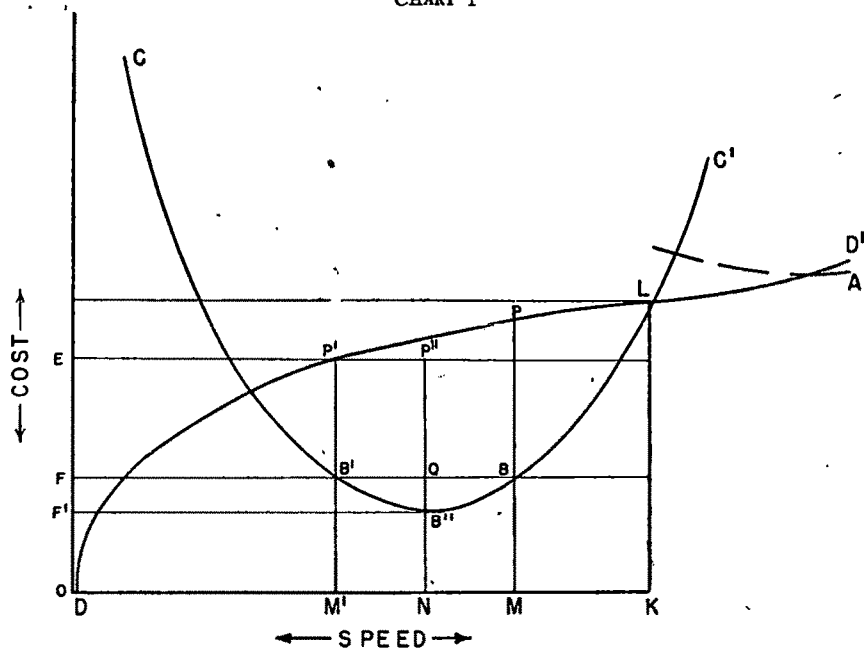
Similarly it can be shown that increasing the load per car, on the other hand, may actually reduce the capacity of a railroad, if the increased unit load results in delaying equipment in the hands of shippers sufficiently to affect the turn-around time appreciably.

It is possible to construct a diagram after the customary pattern relating cost and demand, in which time is substituted for volume produced. In this case, however, since the demand is for saving of

⁶ Cf. *An Economic Analysis of the Element of Speed in Transportation*.

time, this has been represented by a demand for speed. In order to determine the characteristics of the demand for speed itself it is necessary to maintain the volume, i.e., tons moved, constant. The relations between cost and demand are then indicated in the accompanying diagram where the horizontal axis measures variations in the speed at which a given volume of traffic is moved. As the speed increases the unit cost falls, then rises. The demand curve, however, does not assume the customary negative slope. The demand price for

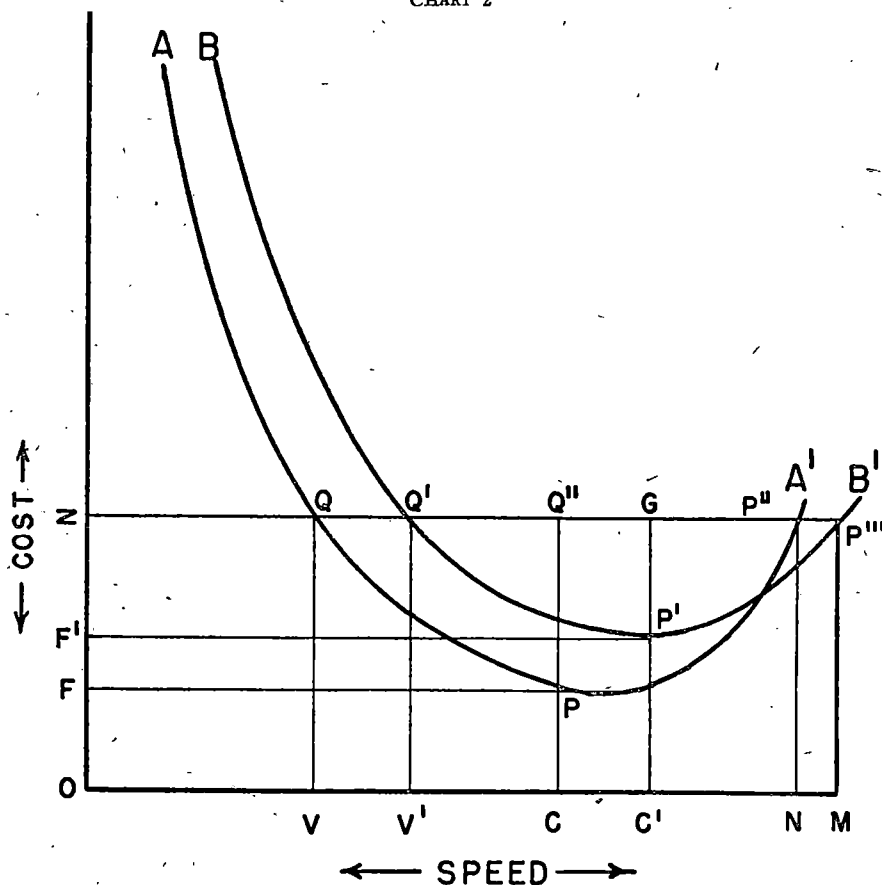
CHART 1



transportation at low speed will be low itself, and a higher price will be paid for high-speed transport. But as the speed is increased the intensity of the demand tends to diminish. The demand becomes more elastic because at the higher speeds certain basic requirements of industry have been met. Additional increments of speed may serve merely to provide a sort of safety factor in the conduct of business which will have to be balanced against other possible expenditures. Some commodities do not normally demand anything beyond a very moderate speed; e.g., low-grade commodities and goods destined for storage. High-grade commodities for which the cost of transport constitutes only a small proportion of the total cost, or where the element of perishability enters either in the good itself or the market for it, will call for higher speeds. But as the speed is increased the

value of additional time saved by further increases will tend to diminish. This situation is exemplified in the competition between air and surface carriers. Certain commodities have been shipped frequently by express, such as shoes, in order to gain the advantage of the higher speed rendered compared with ordinary freight service; but shoes are not being shipped yet in any great volume via air freight

CHART 2



because the speed differential at this higher level is not generally considered worth the extra cost entailed.

In the accompanying diagram suppose that rates have been established on the basis of costs associated with some speed represented by the distance OM' . The cost to provide transport at this speed is higher than that for the optimum— ON for this carrier, represented by the distance $B''Q$. There would consequently be an incentive to

offer transport at a speed equal to ON ; but, in the absence of competition, not greater than ON , since that speed produces the maximum net gain ($B''-Q$). In the face of competition, however, the speed of service might be increased to OM where the cost would again coincide with the rate level. The users of the service would benefit from this increase in speed by getting a higher-valued service at the same price as for the slower service. This benefit is measured by the difference between the vertical distances MP and $M'P'$. If rates were established at the level of the demand curve, increasing with increased speed, under competitive conditions the carrier would presumably eventually offer its service at a speed OK where the cost of providing that speed just equals the demand price represented by the intersection of the cost and demand curves at L .

In the face of a common level of rates established in large measure through government regulation, competition between individual carriers may be largely on the basis of the quality of service offered. This is apt to hinge chiefly on the relative speed provided. The case of two carriers, A and B, is represented in the accompanying diagram. The cost of providing transport at different speeds is represented by the lines $A-A'$ and $B-B'$, respectively. At a given price or rate, OZ , these two carriers will be providing transport service at speeds represented by the distances OV and OV' , respectively. Carrier B can provide faster transport than carrier A at that price, the difference being represented by the distance $V'-V$. But these speeds do not represent a stable situation since both carriers can produce faster service at less cost. Carrier A has an incentive to increase its speed to OC at which point its rate of profit is a maximum, represented by the distance $P-Q''$. But carrier B has the same incentive to increase its speed to OC' where its profit is greatest, though less than carrier A's. The bidding for traffic by offering faster service will go on until carrier A reaches a speed ON where its cost will just equal the rate. At this point its cost is increasing sharply so that it would be uneconomical to provide any higher speed. It might be argued that carrier B would cease increasing its speed at ON also since its service would be equal to A's and it would still be operating at a profit. This, however, would depend upon circumstances. If carrier B could secure an added volume of traffic at a still higher speed sufficient to produce a net aggregate gain at the lower unit margin that would obtain, it might be induced to increase its speed to such a point, which would be somewhere between ON and OM . Carrier B would now be operating a faster service than carrier A. It should be understood that in this analysis the load has remained constant, so that the ton-miles of transportation

service performed would be the same for either carrier at any given speed. In actual practice this would probably not be the case.

The discussion so far has developed the relations between demand, supply, and cost for a single agency of transport, such as a railroad. A true supply curve of speed, however, might be composed of a series of such cost curves appropriate to the different agencies of transport. A supply curve of this sort would have a somewhat different contour, but the relationships indicated here would not be fundamentally altered.

In summary, it may be said that the significance of the element of time in transportation derives from the value placed upon time by the users of transportation as well as the fact that certain costs are directly related to time. The extent of the movement of goods and persons from place to place depends upon two primary factors; namely, the cost and the time required. In the day-to-day conduct of market operations the period of transport (the time in transit) represents a period of suspended adjustment. The appearance of a demand for a shortening of this period follows logically. This demand is evidenced by the willingness of the users of transportation to pay more for fast transport than for slow transport.

The value of certain goods depends upon their condition on reaching the market. This is a function of time. Corollary to this fact stands the proposition that the speed of transport demanded, other things being equal, will tend to vary inversely with the extent of the market. Thus, an article which is salable over a wide area will, in general, not command the same speed of transport as one whose market is restricted geographically. This follows from the fact that the more restricted the market the greater is the risk of failure to reach it. In this case the demand is restricted in space. But the demand may be restricted in time also. The characteristic of perishability may inhere either in the good or in the demand for the good.

The value placed upon time is not strictly constant. This leads directly to the proposition that the value of speed in transportation may be a function of the time *when* transport takes place. Utilization for purposes of transport of hours normally unproductive commercially gives the effect of high speed although the actual velocity of movement may not be high.

The value of speed in transport increases as the value of time increases. The value of time increases as the rate of production (product per man-hour) increases. It follows that the value of speed increases with the degree of industrialization of communities. This leads directly to the other proposition that *speed* of transport is a factor in extending the division of labor and geographical interdependence independently of the *cost* of transport. As industrialization progresses and population

increases, the density of traffic also increases. But it has been demonstrated that an increasing density of traffic can be handled economically with a given investment in fixed facilities by increasing the speed of operation since an increase in speed tends to create increased capacity.

Supplementing this general relationship between the speed of transport and industrial development is the effect of speed on the mobility of both the producer and consumer. Market adjustments are related to the movements of individuals as well as of goods. Buyers and sellers of both labor and materials must be on hand to make a market. The rapidity of adjustments of supply and demand in a market, as well as the amplitude of market fluctuations, depend upon the time consumed in relating the supply to the demand. This may mean the movement of either individuals or goods, and the effect of the time consumed is distinct from that of the cost.

The importance of speed increases as the length of haul increases. Since it takes time to cover distance, the longer the distance the longer the time in transit and, therefore, the greater the incentive to shorten it.

The rent of land is also affected by the speed of transport. As the speed increases economic rent tends to supersede situation rent as a factor affecting the price of land. The rent of land is also related to the cost of transport; but the effect of speed is independent of the effect of cost.

Finally, the economic significance of speed rests on the effect it has been shown to have on the cost not only of transportation itself but of commercial transactions in general. The cost of transport must be recognized as the cost of maintaining a given speed; and the value of high speed is derived from the value put upon time by the users of transportation. Differences in the speed of transport constitute differences in the service rendered which are qualitative in nature as well as quantitative. And the savings to the users of transportation by an increase in speed can be measured in dollars and cents as truly as with a reduction in the rate charged. The speed of transport will conform to the general tempo characteristic of the community. With continued industrial growth and increasing population this general tempo will increase. The speed of transport must, therefore, continue to increase. The implications of a continued increase in the value placed upon time and the consequent increase in the speed of transport are sufficiently broad to deserve the careful consideration of all students in the field of distribution and exchange.

TABLE I
TIME IN TRANSIT AND FARES CHARGED NEW YORK TO REPRESENTATIVE CITIES
VIA RAILROAD & HIGHWAY

New York City To:	Railroad		Highway		Ratios	
	Time Hours	Fare (Coach) Dollars	Time Hours	Fare Dollars	Col. 3 ÷ Col. 1	Col. 2 ÷ Col. 4
	(1)	(2)	(3)	(4)	(5)	(6)
Buffalo.....	8.00	9.63	13.67	6.10	1.71	1.58
Chicago.....	16.00	20.02	25.33	13.60	1.58	1.47
Cincinnati.....	18.17	16.45	20.51	7.70	1.13	2.14
Cleveland.....	10.92	12.60	15.92	9.00	1.46	1.40
Columbus.....	14.37	13.92	18.42	10.20	1.28	1.36
Dayton.....	15.95	15.46	20.02	11.35	1.26	1.36
Erie, Pa.....	10.27	11.61	14.27	7.65	1.39	1.52
Indianapolis.....	14.75	17.88	22.50	12.65	1.52	1.41
Rochester, N. Y.....	7.00	8.20	11.42	5.35	1.63	1.53
St. Louis.....	19.83	23.43	36.42	16.30	1.84	1.44
South Bend, Ind.....	15.00	18.21	24.42	12.95	1.63	1.41
Syracuse.....	5.47	6.38	9.38	4.15	1.74	1.54
Totals.....					18.17	18.16
Average Ratios.....					1.51	1.51

SOURCE: Bus information from Pennsylvania Greyhound Co. Rail information from *Mass Movement*, Part I, "Struggle for Speed," L. K. Sillcox (Harvard University, 1946).

TABLE II
TIME CONSUMED AND COST BY AIR FREIGHT AND RAILROAD
OVER SELECTED ROUTES
(100 lbs. Machine Parts Based on 7500-lb. Shipment)

	Air Freight		Rail Express		Rail Freight	
	Time ¹ (hrs.)	Cost ²	Time ³ (hrs.)	Cost ⁴	Time ⁵ (hrs.)	Cost ⁶
Boston to Houston.....	9.0	\$10.74	53.9	\$ 8.55	(a) 116.5	\$4.26
New York to Los Angeles..	13.7	16.41	87.5	13.41	(a) 124.2	6.67
Chicago to Seattle.....	10.0	11.65	62.5	10.33	(a) 152.0	5.95
Detroit to Miami.....	5.8	7.76	40.3	6.90	(a) 96.0	3.69
Chicago to New Orleans...	4.1	5.53	26.3	4.92	56.8	2.58
New York to Miami.....	5.5	7.35	37.8	6.28	81.7	3.15

¹ Based on flying time average of 200 mph (north to south), 190 mph (east to west), and 210 mph (west to east) with 45-minute stop-overs for refueling approximately every 1300 miles as applied to great circle mileage.

² Based on proposed 13¢ per ton-mile applied to great circle mileage. Includes 3% federal tax.

³ Based on average 35 mph as applied to rail mileage.

⁴ Estimated by Railway Express Agency. Includes 3% federal tax.

⁵ Based on estimated average of 16.2 mph quoted by Assn. of American Railroads for June 1946, as applied to railroad mileage. (a) Actual time or estimate of actual time from specific railroad sources.

⁶ First-class, l.c.l. rail freight, "machine parts N.O.I.B.N." Quoted by a railroad. Includes 3% federal tax.

SOURCE: C.A.B. Docket No. 810 *et al.*, National Skyway Freight Corp., Exhibit No. 63.

COST ANALYSIS IN TRANSPORTATION

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I. Introduction

Cost analysis in transportation has been found to contribute in greater or less measure to the solution of a wide variety of problems relating to transportation rates and services. A brief résumé both of the types of cases in which costs have been helpful and the issues involved in such cases may serve at this point to focus attention on the general nature of the problems with which the analyst must cope.

Probably one of the simplest uses of cost is that involved in the determination of whether or not a particular train or bus schedule should be continued in service. The issue, insofar as costs alone are concerned, can be briefly stated: Do the added revenues from the operation equal or exceed the added expense it incurs? From studies of individual trains it is but a step to the analysis of the revenues and expenses for sizable segments of a carrier's operations, such as passenger commutation services in given metropolitan areas, or, indeed, to passenger services taken in their entirety. However, from a cost-of-service standpoint, as apart from the element of service, the fundamental question is still the same: Do the revenues earned from the service cover the extra expense it occasions? The analyses of the relationship of the revenues from express traffic, less-carload or less-truckload traffic, minimum-charge shipments, and similar broad groups of traffic to the direct costs of handling such traffic fall in the same category.

Cost analysis is frequently involved in abandonment proceedings, a fundamental question being whether the cost of hauling that traffic which originates or terminates on the line to be abandoned and which would be lost to the carrier if the line were abandoned, exceeds the system gross revenues earned from such traffic. Again, on traffic handled over the lines of two or more carriers, questions as to the division of the revenues among the participating roads may call for studies to show the relative expense, line-haul and terminal, which each road incurs in performing its portion of the haul. The proper charges for a wide variety of switching services that may be performed in a single large terminal are frequently determined by cost studies.

Matters involving relative economy and efficiency in the handling of various kinds of traffic for various lengths of haul by competing agencies of transportation call for, among other factors, a knowledge of relative costs. In this case both the so-called "direct" costs and the "indirect" costs may be pertinent. The extent to which territorial differ-

ences in rates can be justified by territorial differences in the costs of performing transportation service naturally calls for comprehensive cost studies.

The foregoing illustrations relate principally to substantial segments of the carrier's traffic, the costs for which can often be directly isolated.

But the usefulness of cost analysis by no means ends here. With adequate accounting and statistical data, cost analysis may be extended to small segments of the traffic such as point-to-point movements of individual commodities¹ or the transportation of the different kinds of traffic when grouped by length of haul, by interstate and intrastate movements, by single-line and interline hauls, by size of shipment, by classification ratings, etc. This latter type of analysis has been increasingly used of late in revenue proceedings involving motor carriers where the matter of selective rate increases on segments of the traffic as opposed to blanket increases for all traffic is being weighed. Cost analysis as applied to individual commodities or kinds of traffic is useful, first, in determining whether the rates or revenues cover and more than cover the added costs incurred in handling the traffic; secondly, in appraising the extent to which rate differentials can be justified by cost considerations; and, thirdly, in testing the compensatory character of rates.

As the foregoing illustrations indicate, cost analysis in the field of transportation may assume a wide variety of forms. In some cases a knowledge of the so-called "variable" or "out-of-pocket" costs suffices. In other cases all costs, both variable and constant, must be taken into consideration. In each instance the analysis made must be governed both by the issues at stake and the fundamental nature and characteristics of transportation costs.

The remainder of this paper treats principally of this latter topic.

II. *Variable and Constant Costs*

Transportation costs at any given level of output (traffic density)² are fundamentally divisible into two components: first, those expenses which are found to vary in direct proportion to changes in output or traffic volume, and, secondly, those expenses which behave as though they were of a fixed or constant character; i.e., wholly independent of the volume of traffic carried.³ The expenses which are found to vary

¹ Specific commodities for which rail or water costs have been introduced in proceedings before federal and state regulatory bodies include coal, sugar, petroleum products, automobiles, molasses, cotton piece goods, boots and shoes, beer, canned goods, citrus fruits, salt, paper, cement, and phosphate rock.

² Traffic output or volume, for purposes herein, refers to the traffic density, i.e., the ton-miles per mile of road or mile of route. Thus changes in traffic volume refer to increased or decreased traffic handled over the same routes and not to changes resulting from, for example, end-to-end consolidations.

³ For a general discussion of constant and variable costs see *The Meaning and Significance*

in direct proportion to output are designated as the variable expenses.⁴ All other costs are designated as the constant costs.

Because of the ramifications of transportation operations, line and terminal, a carrier's output may have many dimensions, all of which must be evaluated in determining the added costs incurred in transporting a commodity between two points. For example, from five to ten different units of output (i.e., service units) may be used in computing the costs for a given rail movement, depending upon the degree of refinement appropriate.⁵ By dividing the variable portion of the expenses associated with each such service unit (car-miles, gross ton-miles)⁶ by the number of such units, the marginal cost for each service unit can be obtained. If the number of service units of each kind (car-miles, gross ton-miles, etc.) consumed in hauling a given weight carload shipment between two given points is multiplied by the marginal cost for each service unit, and the products totaled, the aggregate cost thus obtained constitutes the "added traffic" or "out-of-pocket" cost for the given shipment at that level of output obtaining at the time of the study. The result constitutes the marginal cost for carload shipments of the given weight handled between the given points.

Such added traffic or out-of-pocket costs for any given carload or less-carload movement or for any given part or segment of a carrier's traffic include those costs for labor and material which were incurred as a result of the production of the transportation service in question, or, conversely, those costs which could have been avoided if the service had not rendered.⁷ They include not only those items of cost which can be directly observed and measured, such as the labor required to load ten tons of freight in a car, but also that portion of the expenses

of the Out-of-pocket, Constant, and Joint Costs in Motor Carrier Operation (Interstate Commerce Commission Statement No. 4614).

⁴ The term "variable expenses" is commonly used to mean expenses which vary in some proportion, but not necessarily in direct proportion, to output. When the term is used in this paper it refers to that portion of the expenses which, at the level of output under study, varies in direct proportion to traffic volume.

⁵ The service (or performance) units may include car-miles, car-days, gross ton-miles, net ton-miles, train-miles, locomotive-miles (by class of equipment), yard engine-hours, cars switched (in each class of switching service), shipments billed, and tons handled across a platform. Each unit represents a reasonably homogeneous measure of work performed.

⁶ Car repairs are associated partly with car-miles and partly with car-days, train crews with train-miles by classes of trains or with gross ton-miles, depending upon refinements needed, etc.

⁷ "It is the extra expense incurred if this particular traffic moves . . . and not incurred if it does not so move, which is termed the 'out-of-pocket' expense for this particular item of traffic." Winthrop M. Daniels, *The Price of Transportation Service*, p. 62. "Costs which may be segregated, which are first incurred when a particular article is offered for transportation, and which disappear when that article ceases to move, are known as out-of-pocket costs. They change, by their very nature, in proportion to the amount of traffic, and they are, therefore, variable." Stuart Daggett, *Principles of Inland Transportation* (3rd ed., 1941), p. 317.

incurred in common with other freight in the car such as the wear and tear on the equipment and track occasioned by the miles run. Over the long-run period they also include the cost of capital for that portion of the plant investment which is found to be expanding or contracting in direct proportion to changes in traffic density. In short, the separation of the carrier's costs between the variable expenses on the one hand and the constant expenses on the other strikes across the carrier's entire accounting classification.

These added traffic or out-of-pocket costs are sometimes also referred to as the marginal costs, direct costs, assignable costs, separable costs, traced costs, or prime costs. Whatever the term used, the figures have reality in rate making only to the extent that they reflect the added costs which were incurred because the traffic in question was handled, or the costs which could have been avoided if the traffic were not handled.⁸

The constant costs include all costs which, within the limits of the range of output under study, are independent of changes in output.⁹ Their existence stems from the fact that increases or decreases in output are not followed by proportionate increases or decreases in the carrier's aggregate expenses.¹⁰ These expenses cannot be traced to any particular units of output. They continue to exist irrespective of whether or not any given unit is produced.

The constant costs are sometimes referred to as the overhead costs, the burden, fixed costs, indirect costs, or unassignable costs.¹¹ They are also sometimes called the "joint costs," although this term, for purposes herein, has been given a much more restricted meaning.

III. The Joint Costs

Joint costs have often been described as embracing any cost incurred for the benefit of the business as a whole, such definition in some cases being synonymous with the term constant or overhead costs. However, the term is much more useful, as well as less confusing, if employed in defining and identifying those costs which relate to the problem of by-

⁸ The added costs may be viewed over the short-run or the long-run period depending upon whichever is pertinent in the individual case.

⁹ J. M. Clark, *Encyclopaedia of the Social Sciences* (1937), Vol. 11, p. 511. Stuart Daggett defines the constant costs as follows: "The phrase 'constant cost' has been used . . . to indicate those expenses which, in the aggregate, do not change with changes in the volume of business done, neither rising as traffic grows nor falling off as traffic declines." *Principles of Inland Transportation* (3rd ed., 1941), p. 316.

¹⁰ See J. M. Clark, *Studies in the Economics of Overhead Costs* (1923), p. 1. M. O. Lorenz explained the concept as follows: "When expenses grow less rapidly than the traffic, a portion of the expenses may be looked upon as absolutely independent of the traffic and a portion as varying exactly with it." "Cost and Value of Service in Rate Making," *Quarterly Journal of Economics*, Vol. 30, p. 212.

¹¹ Donald H. Wallace defines overhead cost as meaning a body of cost which does not vary in the same proportion (and in the same direction) as output. *Quarterly Journal of Economics* (1934), Vol. 48, p. 584.

products.¹² As Wallace points out, the rate-making policies called for under conditions of joint cost may differ from those called for under conditions of constant costs.¹³ Unless a distinction is made between constant or overhead costs on the one hand and joint costs on the other, the problems peculiar to each may not be appropriately dealt with.

The term joint costs is here restricted to those costs incurred in rendering two or more transportation services, each of which may take a different rate, the services, however, being the result of a single indivisible transportation operation.¹⁴ Where the expenses are of a joint-cost character the basic approach in cost finding of computing the added costs for one of the services by determining the expenses which could be avoided if this service were not performed, is obviously unworkable.

Joint-cost operations crop up in various places in railroad and motor carrier operations.¹⁵ Their most important characteristic is that, unlike the constant or overhead costs, they would persist even after full utilization of the most efficient carrier plant is reached; i.e., when constant or overhead costs would have approached the vanishing point.¹⁶

Joint-cost operations when taken in their entirety, such as the round-trip movement of equipment or the annual maintenance of added track

¹² J. Maurice Clark states: "In the broad sense joint cost has been frequently spoken of as any cost incurred for the benefit of the entire business or of a considerable class of business as a whole, and not for its separate parts. Used loosely, the term may be virtually equivalent to untraced cost, or constant cost, or indirect cost. In its origin, however, the term had to do with a special problem, namely, that of by-products, and it is more useful if it is confined to this original meaning." *Studies in the Economics of Overhead Costs* (1923), pp. 58-59.

¹³ Donald Wallace, *Quarterly Journal of Economics* (1934), Vol. 48, pp. 585-586.

¹⁴ D. Philip Locklin states: "... true jointness exists only when the production of one commodity necessarily results in the production of another." *Quarterly Journal of Economics*, Vol. 47, p. 194. Jacob Viner states: "The most serviceable definition designates as joint products commodities which are sufficiently distinguishable from each other to have different markets and to command different prices even under competitive conditions, but which are partly or wholly the outcome of a common process of production." *Encyclopaedia of the Social Sciences* (1937), Vol. 4, p. 473.

¹⁵ Referring to the railroad industry, Wallace states: "Two instances of true joint cost in the railway industry are now generally accepted. First, the provision of facilities for transportation in one direction involves making available roughly the same capacity for carriage in the opposite direction. Second, any size of investment is joint for production at different time." *Quarterly Journal of Economics* (1934), Vol. 48, p. 592. Clark points out: "As we have already seen, east-bound and west-bound traffic on railroads furnish another case of joint cost. They are essentially complementary and you cannot haul an added car east without being forced to haul it west again, empty if it cannot find some cargo. Every haul of an empty car represents a possible joint product undeveloped. The special cost of west-bound tonnage is merely the excess cost of hauling cars full over hauling them empty, and the rest is joint." *Studies in the Economics of Overhead Costs* (1923), p. 100. See also *The Meaning and Significance of the Out-of-pocket Constant, and Joint Costs in Motor Carrier Operation* (1946), pp. 7-9 (Interstate Commerce Commission Statement No. 4614).

¹⁶ For differences between constant and joint costs see Wallace, p. 585. Also see Interstate Commerce Commission Statement No. 4614, pp. 7-9.

facilities to meet seasonal traffic demands, are separable between their variable and constant components the same as any other cost. For cost-finding purposes the variable portion of the costs may be spread uniformly over the total output of the joint cost operation.¹⁷

IV. *Determination of the Variable Costs*

Transportation costs are found to be responsive to changes in traffic volume to a very substantial degree except possibly in those cases in which the capacity of the minimum-size plant which can be operated has not yet been reached. To use a simple example, consider the small truck operator with one small vehicle. He will find some of his costs constant. Although his repairs and fuel will be largely proportional to miles operated, his capital costs (payments or allowance for interest on the investment), taxes (other than fuel and mileage taxes), and insurance are largely of a fixed character. The wages of a driver, or the owner's requirements for sustenance and shelter if he drives the truck himself, will likewise be relatively fixed.

However, when his business grows to a point where he must purchase a larger truck or operate two trucks, these same expenses will become variable in large part. When five, ten, or more trucks are operated, it is obvious that, with some lag, the amount of equipment owned and maintained becomes closely adjusted to the volume of traffic handled. Interest,¹⁸ taxes, and insurance on the equipment now vary almost directly with the traffic moved. The operator has now exhausted the unutilized capacity he may have had when he started operation with his single small truck, and the size of his plant and the expense of operating it will, over a period of time, become closely adjusted to the amount of transportation service rendered.¹⁹

For purposes of cost analysis the identification of these variable costs can best be determined from studies of the actual behavior of the costs in the face of changes in traffic volume.²⁰ One method of determining the degree to which expenses are a function of traffic volume is that of

¹⁷ Thus, the costs for the round-trip hauling of the tare weight of the equipment can be divided by the round-trip revenue ton-miles. Any differences in rates by directions must insofar as these costs are concerned, rest on demand factors and not on cost factors.

¹⁸ M. O. Lorenz points out in speaking of interest charges on rail equipment that such charges are as closely related to the traffic as are the maintenance charges for equipment. *Quarterly Journal of Economics* (1916), Vol. 30, p. 229.

¹⁹ J. Maurice Clark observed in this connection: "Starting with a search for certain accounting items which do not vary at all with variations in business and other items which vary in proportion to business, one soon finds that there are no items that remain permanently unchanged, few that remain unchanged for relatively short periods and none that always vary exactly in proportion to business. As a result, every item of cost is bound to have a mixed character." *Studies in the Economics of Overhead Costs* (1923), p. 51.

²⁰ *Ibid.*, p. 223. M. O. Lorenz and B. T. Elmore, *Out-of-pocket Cost As a Factor in Determining Freight Rates* (I.C.C. Statement No. 3352, 1933), pp. 19-30.

noting the year-to-year changes in the expenses (in total or by groups) which accompany year-to-year changes in the traffic volume. However, this type of analysis requires the elimination of the influence of price changes and wage adjustments.²¹ Otherwise, the showing of the relation between expenses and traffic volume would be distorted. Corrections for price level changes and wage changes present no insuperable problem in the railroad industry. In the motor industry, however, it is difficult to provide the necessary adjustments because of the great number of carriers involved, the multiplicity of different wage agreements which apply to different groups of employees and to different areas, and the lack of regularly compiled price indices applicable to motor transportation. To some extent the problem of price changes can be by-passed by relating the output directly against man-hours, although this procedure has many limitations.

Another basis of approach is to take one period of time, i.e., a year, and observe the degree to which the expenses differ between carriers performing a like kind of service but having different levels of output; i.e., traffic densities. To use an example, if carrier B transports 20 per cent more traffic per road-mile or per route-mile than does carrier A which has the same kind of traffic and operating conditions, and the operating expenses of carrier B are 20 per cent greater per route-mile than those of carrier A, the inference can be drawn, other factors being equal,²² that the expenses at the level of output experienced by carrier A are 100 per cent proportional to the traffic volume. If the 20 per cent greater traffic volume enjoyed by carrier B relative to carrier A was accompanied by a 15 per cent increase in its operating expenses as compared with A, it can be similarly inferred, other factors being equal, that 75 per cent of the expenses are directly proportional to output and 25 per cent are essentially unrelated to output; i.e., are constant.²³

It is difficult, of course, to find two carriers operating over identical routes and hauling precisely the same traffic. However, by making a large number of observations of carriers, each observation being limited to a group whose operations are relatively homogeneous, any tendency of the expenses to increase or decrease with changes in output, i.e., density per route-mile, will make itself evident.

The results of this last type of analysis, although based on one period

²¹ It is also desirable to eliminate the influence of technological changes which are not traceable to added volume and which might tend to hold the variable costs relatively fixed in the face of increasing traffic during the period under study. Costs found to be constant under such circumstances would not justify rate differentiation.

²² I.e., the operations being homogeneous as to type of traffic, length of haul and character of service (assembly and distribution versus key-point operations), etc.

²³ These exact proportions would only hold, of course, at that level of output experienced by carrier A.

of time; reflect the long-run effect of changes in traffic volume, inasmuch as the influence of varying densities on the costs for each carrier included in the study may be expected to have become relatively stabilized.

The various approaches to the separation of the variable cost from the constant costs for rail transportation, including those explained above, have been dealt with at length in "Rail Freight Service Costs in the Various Rate Territories of the United States,"²⁴ and no effort will be made to review them here. However, this study indicated that both the rail operating expenses and the investment in the rail plant were, in the long run, responsive in a very substantial degree to changes in traffic volume. Corresponding analyses made for motor carrier operations are reviewed in a study recently completed by the Cost Section of the Bureau of Transport Economics and Statistics.²⁵ An illustration drawn from this study will serve to indicate the methods of approach followed for motor carriers and the general pattern of the cost curves for this industry. Chart I shows the expenses per route-mile plotted against the traffic volume (ton-miles) per route-mile for 15 Class I common carriers of general freight in the Central Region. The average haul for each of these carriers fell within the range of 300 to 349 miles.²⁶ Tests were made to insure reasonable homogeneity of the carriers within each mileage group. The analysis of the data represented by Chart I may be made either graphically²⁷ or mathematically.²⁸

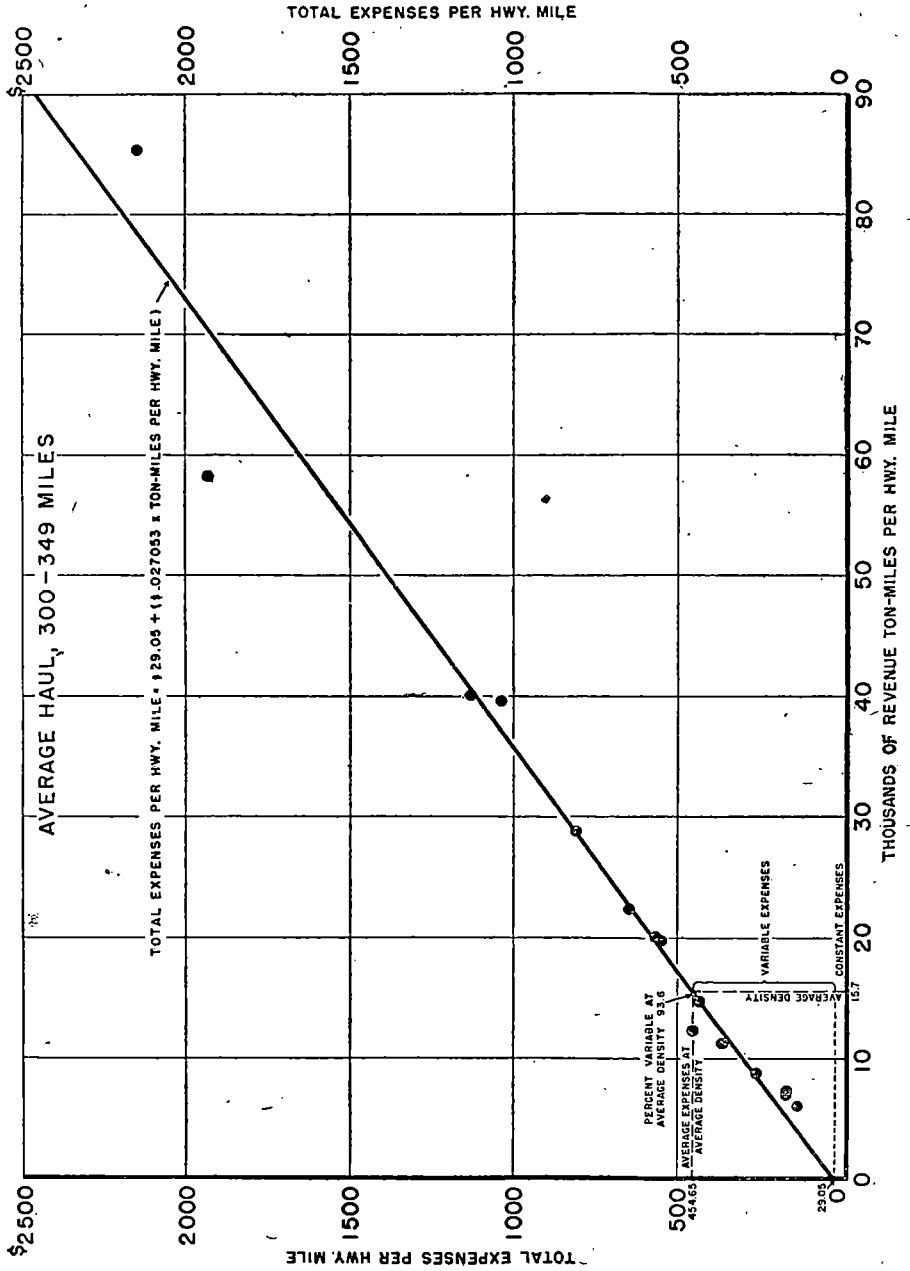
²⁴ Senate Doc. 63, 78th Cong., 1st sess., Ch. IX to XIV. This document is a summary of the exhibits introduced by the Cost Section of the Bureau of Transport Economics and Statistics, Interstate Commerce Commission, in Docket 28300, Class Rate Investigation. Additional unpublished material appears in Exhibit 12 of this proceeding.

²⁵ See study entitled "Explanation of the Development of Motor Carrier Costs with Statement as to Their Meaning and Significance," Ch. III (1946). Introduced as Exhibit 7 in I.C.C. Docket 29556 and Docket MC-C-543. The study related to the year 1943.

²⁶ This chart is one of 41 separate observations conducted in four regions and embracing 325 Class I common carriers of general freight. The results shown above are typical. Class I motor carriers are those with annual operating revenues in excess of \$100,000.

²⁷ Ton-miles per highway-mile (traffic density) are plotted along the horizontal scale while total expenses per highway-mile are plotted against the vertical scale. The trend line may then be drawn in free-hand or computed. A perpendicular line was erected from the base at the point representing the weighted average density for the study carriers in the group; i.e., 15,732.12 ton-miles per highway-mile for the illustration shown. From the point where this perpendicular intersects the trend line a horizontal line was drawn to the vertical axis to indicate the reading at this point. The reading at this point is \$454.65 which constitutes the average expenses per highway-mile at the average density of traffic. These are the expenses per highway-mile (total operating expenses, rents, and taxes) found to be incurred under conditions of average density. By taking the point at which the trend line intersects the vertical ordinate at zero density, the expense of \$454.65 can be separated between its variable and constant components based on the behavior of the expenses under conditions of average density. Referring to the chart, the constant expenses (\$29.05) are indicated by reading the vertical ordinate for zero density at the point it is intersected by the trend line. The remaining expenses amounting to \$425.60 (\$454.65 — \$29.05) represent the variable portion. The variable portion of the expenses amount to 93.6% of the total ($\$425.60 \div \454.65). Attention is called to the fact that whenever the trend line intersects the ordinate for zero density at zero dollars,

CHART I
EFFECT OF VARIATIONS IN TRAFFIC DENSITY ON MOTOR CARRIER EXPENSES BASED ON DATA
OF CLASS I COMMON CARRIERS OF GENERAL FREIGHT IN CENTRAL REGION IN 1943



The figures include operating expenses, rents, and taxes, but exclude income taxes and any allowance for return or profit.²⁸

The chart indicates that at the average level of output for the study carriers (15,732 ton-miles per mile of route) 93.6 per cent of the expenses varied in direct proportion to the volume of traffic carried. Thus, as the traffic increases the expenses increase in almost direct proportion. From Chart I it is evident also that the proportion by which the expenses are variable changes with each change in the level of output. The constant costs constitute an increasing proportion of the total costs as the volume declines and a decreasing proportion as the volume increases. This change in the percentage of the expenses which are variable has no special significance, however, other than that in computing marginal costs care should be taken to use that percentage which is applicable at the level of output for which expense data are available.

Where the relationship of the aggregate expenses to output is linear (as in Chart I), the marginal cost is identical at all levels of output. The curves for the average costs per unit (including both the variable and the constant costs) and for the marginal costs are shown in Chart II based on the data portrayed in Chart I.

The shapes of the cost curves in Chart II are characteristic of those for the Class I general commodity motor carriers. On some very short hauls, principally under a hundred miles, some degree of curvilinear relation was found (see Chart I).³⁰ The slope of a tangent drawn to any point on the curve (i.e., at any desired density of traffic) measures the unit change in the expenses which accompanied each unit change in

the expenses will be 100% variable (i.e., all expenses will be in direct proportion to the traffic volume).

²⁸ The trend line shown was mathematically computed by the method of least squares. Where the relation is linear, it is described by the equation:

$$y = a + bx$$

y = total expenses per highway-mile

x = ton-miles per highway-mile

a = constant expenses

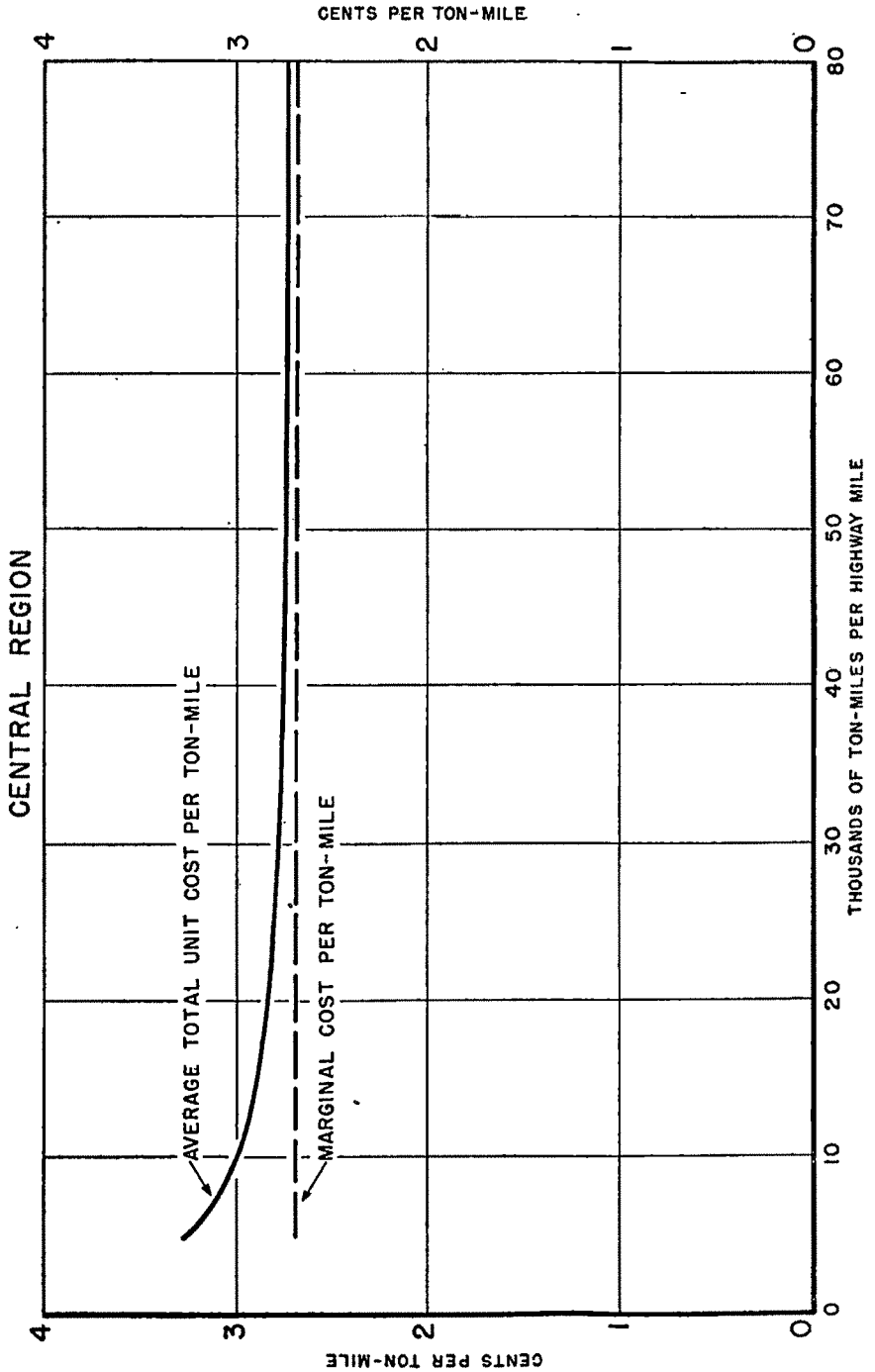
b = the average change in expenses per highway-mile accompanying each unit change in ton-miles per highway-mile

Applying this equation in the construction of the trend line in the chart, the total expenses per highway-mile equals \$29.05 plus (\$0.027053 multiplied by the ton-miles per highway-mile). The point \$29.05 at which the trend line cuts the y ordinate at zero traffic density is represented by a , the constant expenses. The product of \$0.027053 (the average change in expenses with each change in ton-miles) and 15,732.12 (the average ton-miles per highway-mile) amounting to \$425.60 constitutes the expenses which are proportional to output at the average density of traffic. The per cent by which the expenses are variable (i.e., directly proportional to output) at this density is 93.6 (\$425.60 ÷ \$454.65). At lower levels of output the per cent by which the expenses are variable decreases while at higher levels of output the percentage increases.

²⁹ The element of return or profit, at least that which is over and above allowances for interest, would have the characteristics of overhead costs.

³⁰ On the few hauls concerned, principally those of 25-49 miles and 50-74 miles, factors other than density, the influence of which was not fully excluded, affected the shape of the curve.

CHART II
COST CURVES FOR CLASS I COMMON CARRIERS OF GENERAL FREIGHT HAVING
AN AVERAGE HAUL OF 300-349 MILES



the traffic at such density. Also, a tangent drawn at any point on the curve (i.e., at any level of output) can be used to measure the proportion of the total costs which are varying in direct relation to traffic volume at such point.³¹

Where the relation of aggregate costs to traffic volume is curvilinear, the marginal costs obviously change with each change in output. In the studies referred to herein,³² the presence of curvilinear relationships was so very limited as to have no influence on the over-all picture. The results of the study in the Central Region, covering 177 carriers, were as follows:

Mileage Groups (1)	Number of Carriers (2)	Per cent Variable at Average Density for Test Study Carriers (3)
Central Region (178 Carriers)		
25- 49 miles	7	95.0
50- 74 "	16	93.0
75- 99 "	23	80.0
100-124 "	10	100.0
125-149 "	12	97.9
150-174 "	19	89.1
175-199 "	13	110.2
200-224 "	11	95.2
225-249 "	10	99.2
250-274 "	8	118.6
275-299 "	12	99.0
300-349 "	15	93.6
350-399 "	8	84.5
400-549 "	5	87.7
550-749 "	4	99.6
750 miles and over	4	80.7
Total		95.0

The conclusion was drawn by those presenting this study that for the Class I general commodity carriers between 90 and 100 per cent of the operating expenses are directly proportional to output.³³

Rail studies based on the carriers' prewar experience showed 70 to 80 per cent of the operating expenses to be varying with output.³⁴

³¹ The point at which the tangent cuts the y ordinate at zero traffic density represents the element of constant expense which is present in the costs at the level of output under observation. The total expenses at such density, less the constant expenses, represent the expenses which are varying in direct proportion to output. The per cent variable at such density is computed by dividing the variable portion of the expenses at this point by the total expenses.

³² See study entitled "Explanation of the Development of Motor Carrier Costs with Statement as to Their Meaning and Significance," Ch. III, introduced as Exhibit 7 in I.C.C. Docket 29556.

³³ The study points out (p. 110) that the observations were based on the year 1943, a wartime period when there were strong incentives to load line-haul trucks to capacity at all times. The effect of a future easing in the supply of motor transportation on the figures is, of course, not now known but it is not believed that it will be substantial.

³⁴ Senate Doc. 63, 78th Cong., 1st sess., "Rail Freight Service Costs in the Various Rate Territories of the United States" (1943), p. 75.

The corresponding percentages for the rail investment (taken over the long run) were somewhat lower (50 to 70 per cent). The highest percentages were found in the territory where the traffic density was highest; namely, in the East. The studies indicated that, within the range of the traffic densities observed, the relationship of aggregate expenses to traffic output was linear.

The differences in the degree to which rail and motor carrier figures are variable are traceable in part to the fact that constant costs are present in the rail maintenance-of-way expenses and in the capital costs resulting from the investment in road property. The corresponding roadway costs for motor carriers are distributed on a "use" basis through gas taxes and license fees, and, insofar as the motor carriers are concerned, they become proportional to the traffic carried.³⁵

Some situations do not require or do not lend themselves to the type of studies just mentioned. Where the traffic under study is handled in operations which are more or less separate and apart from the remainder of the services, much of the "added expenses" can be directly isolated from an analysis of the accounting records. This is true for the passenger services and for branch-line operations. Other situations must be handled on their own merits, consideration being given to the practical aspects of the problem and whether the issues call for a short-term or long-term approach.

A few examples suffice. The added costs for the transportation of a limited number of automobiles lashed to the spar deck of a general cargo vessel operating between ports on the Great Lakes were found to include only a very small part of the total operating expenses, such as the costs for loading and unloading the automobiles, and the extra clerical work in billing the shipment.³⁶ On the other hand, the added costs for vessel operations devoted exclusively to the hauling of automobiles between the same ports were calculated to include practically the entire expenses of the company so engaged, on the principle that if no automobiles were carried, no expenses would be incurred. The added

³⁵ The foregoing figures are not, of course, intended to imply that any series of changes in the traffic volume are directly followed by a smooth series of adjustments in the expenses. The adjustment of expenses to output is inevitably somewhat irregular and jerky as many writers have pointed out. The added expenses of handling "one more car" through origin, destination, or intermediate terminals or the added line-haul fuel cost occasioned by "one more ton-mile" or "one more car-mile" obviously cannot be directly isolated. However, with rail traffic in a constant state of flux there is no lack of evidence from which to determine the cumulative effect of incremental changes in traffic volume on costs, taking measurable changes in the traffic volume amounting to 5, 10, or 15% of the total traffic handled. It is also recognized that, when the growth of traffic is very rapid, operating expenses may grow more rapidly than the figures given herein may indicate and the expansion of the investment may lag. Should the higher level of output be permanently maintained, capital costs will subsequently increase and operating expenses will be reduced somewhat as capital improvements replace labor.

³⁶ Docket 28190, *New Automobiles in Interstate Commerce*, 259 I.C.C. 475, 508 (1945).

costs for the hauling of mail in a combination mail, express, and passenger car in a way-freight train, the car being operated regardless of the carriage of mail, were indicated to be negligible.³⁷ However, in the event the elimination of the mail service would subsequently permit of the elimination of the car, the out-of-pocket costs would include the small amount of added fuel consumption caused by the car plus the maintenance of the car.

The added expenses for suburban traffic have been estimated to be those expenses which the carrier could save if the service were eliminated, such as the wages of the station agents and train crews who would be released, the maintenance and operation of the coach yards and the car cleaning track which could be eliminated, the maintenance of the station buildings which could be closed, the maintenance of the third and fourth running tracks on the main line which could be torn up, etc.³⁸

The added expenses of handling less-carload freight hauled in through trains made up of L.C.L. cars have been taken to include all the direct expenses traceable to such trains, such as train and engine crews, fuel, locomotive and car repairs, make-up and break-up of the train, etc. At the other extreme, where the less-carload traffic was handled in way cars by local freight trains operating daily or triweekly service on branch lines to serve carload shippers, the added expenses were largely limited to that occasioned by the extra time directly incurred by the crews in switching the way car and in loading and unloading the L.C.L. freight.³⁹

V. Treatment of the Constant Costs

Once ascertained, the variable costs can, without much difficulty, be assigned or apportioned to the traffic which occasioned them. The constant or overhead costs present a different problem. Inasmuch as these costs continue, irrespective of whether or not given increments of traffic are handled, they are not capable of assignment to particular kinds of traffic on a cost-of-service basis. Their apportionment for rate-making purposes can only rest on demand or value-of-service consideration.⁴⁰

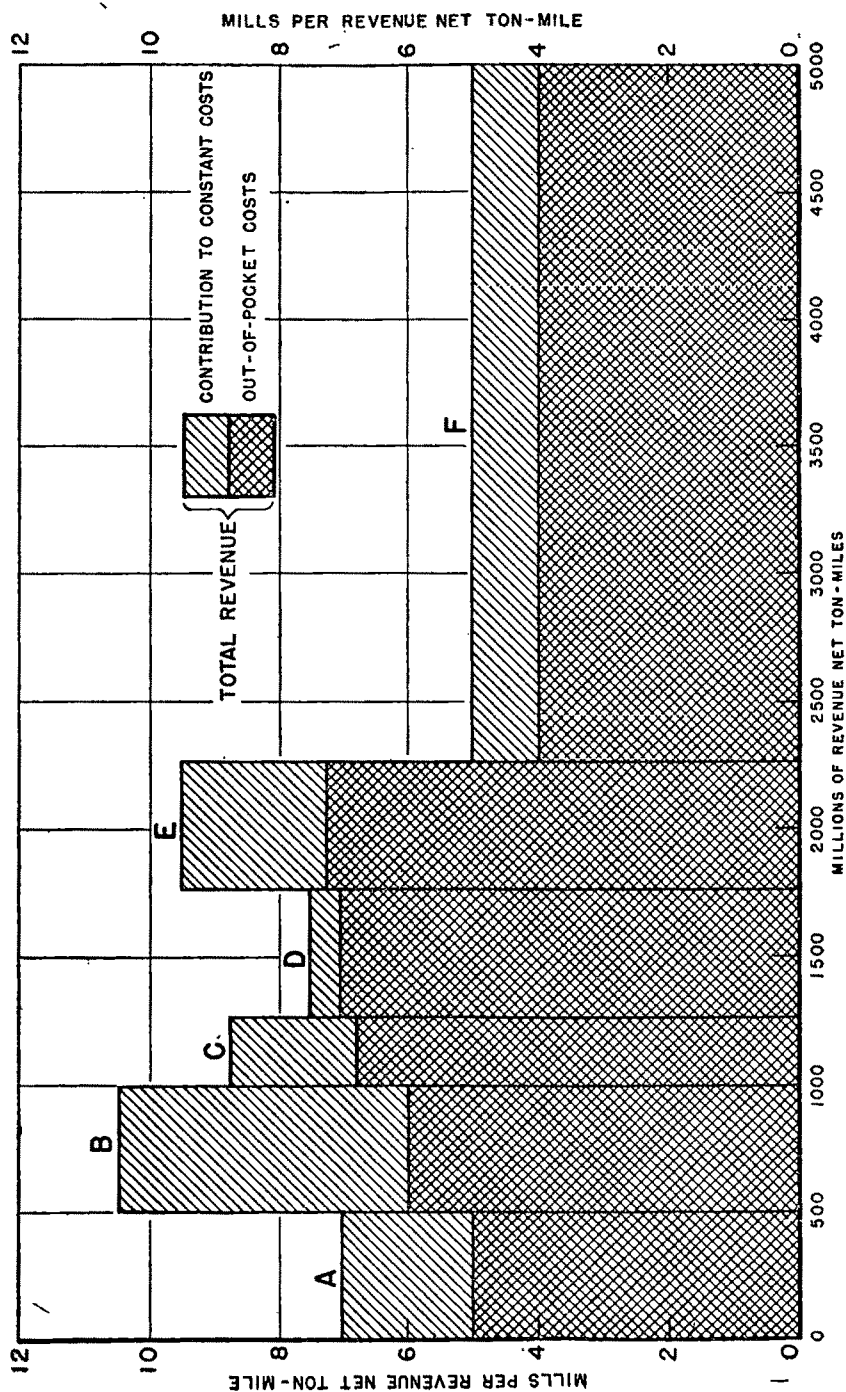
³⁷ *In the U. S. Court of Claims, Wm. V. Griffin et al. Plaintiff vs. The United States of America, Defendant*, No. 45622, pp. 279-290 (1946).

³⁸ See Interstate Commerce Commission Statement No. 441 entitled "Formula Providing for a Comparison of Railway Revenues with Expenses for Suburban and Commutation Services" prepared by Cost Section of the Bureau of Transport Economics and Statistics.

³⁹ Interstate Commerce Commission I&S Docket 4690, "All Commodities, L.C.L. between Maine, Massachusetts and New Hampshire," Exhibit 24.

⁴⁰ In *Alden Coal Company et al. vs. Central Railroad Company of New Jersey et al.* 263 I.C.C. 654 (1945), the Interstate Commerce Commission briefly summed up the problem when it stated: "... the nature of rail costs is such that they could seldom be used, as the sole measure of a line-haul rate. This arises from the inherent nature of rail costs which are made up partly of expenses directly assignable to particular kinds

CHART III
HYPOTHETICAL DISTRIBUTION OF THE CONSTANT COSTS IN RAIL RATE MAKING



The analysis of value of service or demand is something quite separate and apart from cost analysis. The problem is graphically illustrated in Chart III which gives a hypothetical distribution of the constant cost or burden in rail rate making. The horizontal scale on the chart shows the net ton-miles handled of each of six commodities. The vertical scale on the chart indicates the out-of-pocket costs and revenues in mills per net ton-mile.⁴¹ The maximum height of each bar shows the revenue in mills per net ton-mile. The crosshatched area of each bar shows the total out-of-pocket cost (ton-miles multiplied by the out-of-pocket cost per ton-mile). The total area of each bar represents the total revenue received for the commodity (ton-miles multiplied by revenue per ton-mile). The difference between the total area of the bar and the crosshatched portion of the bar (i.e., the area marked by the diagonal lines) indicates the contribution (over and above the out-of-pocket costs) which the commodity makes to the constant costs or burden.

Apportioning the constant costs according to demand (value-of-service) considerations means setting such rates on each commodity as will, in conjunction with the volume of traffic induced by such rate, maximize the aggregate contribution above out-of-pocket costs; i.e., maximize the area marked by the diagonal lines. When subjected to the limitations that unjustifiable discrimination or exploitation shall not be present and that the over-all return or profit to the carrier be no more than reasonable, considerations of demand find expression in rate reductions on heavy volume traffic. Where the traffic is highly elastic, rates can be cut to that point where the contribution to over-

of traffic, i.e., the out-of-pocket or variable expense, and partly of expenses of a constant or fixed character which, being incurred on behalf of the operation as a whole, are not capable of assignment to particular kinds or segments of the traffic on a cost-of-service basis. For purposes of analysis and comparison these constant or fixed costs are usually apportioned on some statistical basis. For rate-making purposes, however, they must ultimately be borne by, or fairly apportioned to, the various kinds of traffic upon a value-of-service or ability-to-pay basis, consideration being given, however, to generally recognized or accepted policies in the distribution of the transportation burden." M. O. Lorenz has pointed out that the constant costs represent the scope for the value-of-service element. *Quarterly Journal of Economics*, Vol. 30, p. 219. J. M. Clark pointed out in a similar vein: "The differential costs have to be covered by any unit of business if it is to be worth taking as a separate increment. The rest have to be at least approximately covered by the business as a whole in the long run, but in the short run there is no such necessity; and in any case the amount borne by any given part of the business is a matter of policy and apportionment, not of controlling necessity arising from the facts of cost. So far as the decision is governed by economic law, sensitiveness of demand is likely to be the deciding factor." "Overhead Costs," *Encyclopaedia of the Social Sciences* (1937), Vol. 11, p. 511. Referring to the often quoted three "C's" of rate making, i.e., costs, comparison, and compromise, the latter two, comparison and compromise, are probably the rate maker's equivalent to the concept of demand or value of service.

⁴¹ Differences in costs and revenues per ton-mile for different commodities are caused in part by differences in the average lengths of haul. Other factors being equal, short-haul traffic, with its high proportion of terminal costs, has a high cost and a high revenue per ton-mile.

head reaches its maximum, the advantages resulting therefrom being realized, not only in lower rates on the traffic in question, but by a reduction in the burden which otherwise must be borne by traffic having a less elastic demand. Thus, as Hadley stated,⁴² the determination of the proper rate on commodities having an expansible traffic volume is fundamentally a problem of determining the point at which further rate reductions no longer serve to increase gross earnings faster than they increase operating expenses. The theoretically proper distribution of the constant costs for a commodity having expansible traffic volume would be attained when the net addition to overhead equals zero; that is, the increase in gross revenue resulting from the application of a reduced rate to the larger volume of traffic induced by such rate would just equal the "added costs" of handling the newly induced traffic. In Chart III the rates on the low-grade Commodity F are presumed to be set at this level.⁴³ With rates set at this point the contribution to the constant costs or burden is at its maximum. The residual burden to be borne by the higher-grade commodities is at its minimum. Should the rate on Commodity F be either raised or lowered, the burden on the remaining commodities would be increased.

In truck transportation the element of constant expense is usually so small that for some types of cases its existence can well-nigh be ignored.⁴⁴ In rail transportation its importance is much greater and any treatment of the constant costs takes on substantial significance. Where a showing of the comparative cost of performing transportation service in different geographical regions is in issue, the constant or fixed expenses must of necessity be included as otherwise the picture of relative costs would be incomplete. Where cost comparisons are desired between different agencies of transportation, some treatment or recognition of the constant costs is usually essential. In division cases and in rate cases involving the entire traffic of a carrier the total costs must be taken into account.⁴⁵

Various procedures may be followed in dealing with the constant costs. They may, with logic, be eliminated entirely from consideration; they may be expressed as a lump sum; or they may be statistically apportioned to the study traffic on one or another basis for purpose of analysis and comparison.

⁴² A. T. Hadley, *Railroad Transportation* (1900), pp. 109, 261.

⁴³ As a practical matter the establishment of the proper level of a rate on Commodity F is substantially a matter of traffic judgment with but little opportunity for experiment, at least over short-run periods.

⁴⁴ In terminal switching cases or drayage cases rate differentiation based on demand (value-of-service) considerations is frequently absent, rates being set on a flat amount per car, per ton, or per 100-pound basis. Any differentiation in rates (by zones or weight of shipment) is limited to that justified by cost considerations.

⁴⁵ At least insofar as the constant portion of the operating expenses is concerned.

If the constant costs are eliminated entirely, or treated as a lump sum, it may be difficult for the rate maker to grasp, even within broad limits, the extent to which they are present in the operation and must be allowed for in fixing rates. There is also the problem that cost studies which deal with the out-of-pocket costs only tend to be viewed with suspicion and distrust. This latter condition probably springs in part from the Court dicta in *Northern Pacific Railway Company vs. North Dakota*⁴⁶ to the effect that "the outlays that exclusively pertain to a given class of traffic must be assigned to that class, and the other expenses must be fairly apportioned. It may be difficult to make such an apportionment, but when conclusions are based on cost the entire cost must be taken into account."

The observation by the Court that it may be difficult to apportion fairly the unassignable (constant) costs is a masterpiece of understatement. The position of the Court in this case has frequently been interpreted as meaning that a rate fixed by a regulatory body must, to avoid confiscation, cover not only the assignable or out-of-pocket costs but also some more or less arbitrary apportionment of the constant costs. But as economists have hastened to point out, the effect would be to give the constant costs a significance in law which they do not have either in economics or in the day-to-day processes of rate making.⁴⁷

Generally speaking, it appears more helpful than otherwise to provide for some showing as to the constant costs. A common practice in cost studies is to apportion the constant costs on the basis of the directly assignable expenses. It is the simplest method of procedure, and, where the output consists of unlike products, it may be the only method available. If the constant costs are relatively small, and the nature of the treatment fully understood, such a procedure may serve the purpose. However, in transportation this basis results in the appor-

⁴⁶ 236 U.S. 585, 596 (1915).

⁴⁷ Although the Court stated that (as to operating expenses, general expenses, and taxes) it found no basis for distinguishing between the so-called "out-of-pocket" costs and other outlays which are none the less actually made because they are applicable to all traffic instead of being exclusively incurred on the traffic in question (236 U.S. 597), the Court nevertheless went on to point out that the legislature is not bound to fix uniform rates for all commodities or to secure the same percentage of profit on every sort of business. Factors to be considered included differences in the articles transported, risk and value of service (pp. 598-599). It may be observed, however, that value of service cannot be a factor in rate making without being a factor in the apportionment of the constant costs, the latter being the only costs left after one disposes of the directly assignable expenses. The Court, however, seemed to treat rail profits not only as something apart from costs but as the only elements as to which the factor of value of service can come into play. But rail profits (or costs of capital) are in the long run no different from any other costs that must be recovered if the service is to have long-run survival value, except possibly that a larger proportion of such costs is in the overhead group than is true for operating expenses generally. Such a narrow interpretation of the scope of demand or the value of service in rate making could serve to unduly limit rate differentiation.

tionment of a relatively large amount of the constant expenses to shipments as to which the out-of-pocket cost per hundred pounds is high. Conversely it apportions a relatively small amount to shipments as to which the out-of-pocket cost per hundred pounds is low.⁴⁸

The result is a showing of the fully distributed costs per hundred pounds for two shipments, one large and one small, which differ by an amount greater than the difference in their out-of-pocket costs; i.e., the costs differ by an amount greater than can be supported by any difference in the physical conditions surrounding their movement. The result is to exaggerate the savings which would accrue to the carrier as a result of a shift from small shipments to large shipments.⁴⁹

An alternative procedure is that of giving the constant costs a pro rata distribution over all revenue units of traffic handled. An equal contribution to constant costs is apportioned per revenue unit of service performed. The constant expenses which are incurred in terminal operation and which are unrelated to the length of haul are distributed over the revenue units in terminal service, i.e., revenue tons originated and terminated; while the remaining expenses which are related to the length of haul are distributed over the revenue units in line-haul service, i.e., revenue ton-miles.⁵⁰

An important characteristic of the pro rata ton and ton-mile method of distributing the constant costs is that it limits the difference in the

⁴⁸ The results cannot be reconciled with the fact that, from a cost-of-service standpoint, there is no justification for apportioning any more of the constant expense to any one revenue unit (ton or ton-mile) than to any other revenue unit in setting up comparative cost figures. This follows from the fact that no relation exists between the constant costs and the amount of work performed in handling the traffic. If there were a relation between these costs and the amount of work performed, or the manner of handling the traffic, the costs obviously would not be constant.

⁴⁹ The thought has sometimes been advanced that a relatively high out-of-pocket cost per hundred pounds is usually accompanied by a correspondingly high value of service or ability to pay and that, therefore, the dollar apportionment of the constant costs gives effect to value-of-service or demand considerations. The counterpart in industrial or commercial price fixing is the distribution of the "overhead burden" through a uniform percentage mark-up over the direct costs. (However, mark-ups made by a business establishment often vary substantially between different lines of goods handled.) The result is not strictly cost. Rather it is a combination of the direct cost plus an arbitrary apportionment of the overhead using the direct cost as a rough measure of the consumer's ability to pay (intensity of the demand) where experience may have shown such procedure to be workable. The principle that high out-of-pocket costs are accompanied by a high ability to pay and low out-of-pocket costs are accompanied by a low ability to pay may work after a fashion for some commodity groups but may fail badly as to others. The principle has too many exceptions to make it one which can be relied upon in all cases. Factors governing costs, such as the size of the shipments, density of the commodity, and the length of haul are not necessarily measures of the value of the service or the conditions of demand which may vary as between commodities, directions of haul, lengths of haul, and market areas. The element of demand should be considered on its own merits.

⁵⁰ In cost exhibits prepared by the Cost Section of the Interstate Commerce Commission the figures resulting from both methods of treating the constant costs are often given in addition to a showing of the out-of-pocket costs. I.C.C. Statement 4614, p. 29.

fully distributed costs for any two shipments or commodities hauled a given distance to the difference in the added costs incurred in their handling. Also, the results are divorced from any influence of value-of-service considerations. This latter is important where the extent to which noncost considerations have entered into rate making is a matter of interest.

If rate discrimination or differentiation is defined as differences in rates not explainable by cost considerations, the effect of superimposing a pro rata distribution of the constant costs on the variable costs, is to show the "charges" which would exist in the absence of differential charging or discrimination.

As Wallace puts it, "discrimination involves charges for different units of service which stand at unequal heights above the respective amounts of extra expense caused by the provision of each of those units. This means that when each of two ton-miles contributes by itself alone a different amount to revenue over and above extra expense, discrimination is present."⁵¹

By comparing the actual revenues with the fully distributed costs, the constant costs being apportioned on a ton and ton-mile basis, an appraisal can be made as to the direction and extent of the influence which demand considerations apart from cost considerations have had in making a rate.

Comparisons of this nature made in 1939 showed, for example, that taking the country as a whole the products of agriculture, the products of mines, and the products of forests generally moved at rates which were 10 to 20 per cent below their fully distributed costs; that is, they moved at rates which, ton-mile for ton-mile, made a less than average contribution to the revenue needs over and above the extra expense they incurred.⁵² They moved at rates which were 10 to 20 per cent below what they would have been if no rate differentiation were present. Manufactures and miscellaneous, on the other hand, moved at rates which averaged 20 to 30 per cent above their fully distributed costs; that is, ton-mile for ton-mile they made a greater than average contribution to revenue needs over and above the extra expense they incurred. As indicated in the explanation to Chart III,

⁵¹ "Joint and Overhead Cost and Railway Rate Policy," *Quarterly Journal of Economics* (1934), Vol. 48, p. 584. Wallace points out that discrimination is here employed in the sense made familiar by Professor Pigou. Locklin defines differential charging or discrimination as "differences in rates not justified by differences in cost of service." *Economics of Transportation* (1938), pp. 145-146. Hadley states "a difference in rates not based upon any corresponding difference in costs constitutes a case of discrimination." *Railroad Transportation* (1900), p. 108. The term discrimination as here used does not, of course, have the connotation which is associated with the terms "unjust discrimination" or "unreasonable discrimination."

⁵² Senate Doc. 63, 78th Cong., 1st sess., Appendix C, Table 2.

such percentages do not themselves indicate whether a rate is too high or too low. They serve only as a point of departure in an analysis of the influence of demand in the making of rates.

VII. *Conclusions*

The significance of cost of service as opposed to value of service in rate making may be briefly summed up as follows: Cost-of-service considerations go principally to the apportionment of the (long-run variable) costs.⁵³ Value-of-service or demand considerations go to the apportionment of the constant and joint costs.

The assignment of the variable costs is fundamentally based on the relative use which the traffic in question makes of the carrier's plant and facilities. The apportionment of the constant costs is fundamentally based on a weighing of the effect which the rates themselves would have upon the movement of the traffic and the carrier's revenues. Of far-reaching significance in this latter connection has been the recognition and application of the principle that by reducing the rates on traffic having expansible (elastic) traffic volume, the contribution to the constant costs or revenue needs can be increased, within limits, beyond that attainable by limiting rate differentiation strictly to cost-of-service considerations.

⁵³ Cost analysis usually includes, in addition, a determination of the amount and extent of the constant and joint costs present in an operation plus an apportionment of these expenses for purposes of analysis and comparison. Where, for purposes of tariff simplicity or by custom, the value of the service is assumed to be equal for all revenue units of traffic handled (such as in fixing local cartage rates per hundred pounds or rail switching rates per car), the fully distributed cost itself furnishes a direct guide to the rate.

SOME PROBLEMS OF POSTWAR AIR TRANSPORTATION

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Characteristics of the Present Period

The present period of growth of commercial air transportation cannot be described as a reconversion to previously established patterns of service, since air transportation is too young and flexible to have a mold already cast for it. It is rather a period of rapid and strenuous development of new services and new markets. A war-accelerated technology and a war-retarded market offer apparently limitless opportunities for expansion, but at the same time pose numerous and vexing problems for the industry and for government. In no other field of transportation is there so much promise for the future, or so much uncertainty in the present.

Neither expert "insiders" nor expert "outsiders" can tell with exactness where the air transport industry is heading. As illustration of apparent confusion on the inside, contrast the much publicized statements of Mr. C. R. Smith, Chairman of the Board of Directors of American Airlines, to the effect that the industry's chief task in the passenger field is to provide mass service at low fares,¹ with the contention of Mr. Ralph Damon, President of American Airlines, in a recent folder on passenger policy: "When we think of 'mass' or 'volume' transportation we think of street cars, subways, and buses. We are not, and will not be, in that business."² As evidence of the changing attitudes of outsiders—expert and other—with respect to air transportation, in the 1946 stock market airline securities fluctuated more widely than those of any other industrial group, and at the close of the year averaged little more than a third of their highs made last spring.³ Probably the shortest way of describing the current situation of the twenty domestic airlines is this: Net revenue from operations, 1945—\$42,398,691; net revenue from operations, 1946—\$4,788,317.⁴

Passenger Capacity

Whether or not commercial aviation intends to serve a mass market, there is no question that it is acquiring a capacity adequate for the purpose. As of December 15, 1946, certificated airlines had in domestic

¹ "What This Country Needs Is a Good Three-Cent Airline," *Saturday Evening Post*, October 20, 1945.

² *Passenger Service Policy* (American Airlines, Inc., September, 1946).

³ The stock of one major airline fell from 71 to 18, a drop of 74%. The Dow-Jones average for all industrial stocks declined only 28%.

⁴ Figures for twelve months ending September 30, *C.A.B. Report 2780*.

operation 655 planes of all types and for the year as a whole carried a traffic estimated at more than 6 billion passenger-miles.⁵ This figure compared with 3.5 billion passenger-miles in 1945 and 1.4 billion in 1941. In addition, these airlines had on order 350 million dollars of new equipment, some of which will replace but much of which will supplement existing capacity. As yet there is no haste to replace the DC-3 aircraft, many of which have been in service nine years or more, one reason being that there is no effective substitute for trips of short and medium length—until the Martin 202's and 303's and the Convair (Consolidated Vultee Aircraft) 240's are delivered. But assuming that one-half the DC-3 fleet has been retired by 1948, and making certain other assumptions with regard to the seating capacity, utilization, speed, and performance of the new planes, the airlines will have enough equipment in operation by the end of 1948 to provide 21 billion passenger-miles of service, at an average load factor, or ratio of occupancy, of 60 per cent.⁶

ESTIMATED PASSENGER CAPACITY OF DOMESTIC AIRLINES, 1948^a

<i>Plane Type</i>	<i>Number</i>	<i>Seats</i>	<i>Speed (Miles/hr.)</i>	<i>Annual Passenger-Miles (billions)</i>
Douglas DC-3	267	21	160	1.68
Douglas DC-4	273	48	205	4.79
Douglas DC-6	113	50	250	2.62
Constellation	114	48	240	2.51
Martin 202, 303	239	38	240	4.26
Boeing-377	45	65	275	1.62
Republic Rainbow	26	45	325	.71
Convair-240	145	38	240	2.45
Convair-37	3	150	270	.23
Total Capacity				20.87

^a Source of data: Air Transport Association of America.

While some of these orders for new equipment may be canceled, probably not all orders have been recorded. Nor do these figures include the additional domestic capacity provided by newly-certified and non-scheduled carriers.

This over-all capacity of 21 billion passenger-miles must, of course, be split between domestic and international operations. As of December 15, 1946, United States airlines had 161 planes in foreign

⁵ *Airlines' Year-End Review* (Air Transport Association), December 26, 1946.

⁶ It is assumed that all Boeing 307's will have been retired by 1948. Seats per plane, which may be varied to suit individual companies, have been averaged between domestic craft, those engaged in foreign commerce which carry extra crew and gas and fewer passengers, and sleepers. Speed, block-to-block, or while the airplane is in operation on the ground and in the air, is based upon plane specifications adjusted for the probable type service in which the plane will be used. Average utilization (daily flying hours) is expected to be nine hours a day, and performance (miles flown of miles scheduled), 95%. Load factor is the ratio of passenger-miles to seat-miles flown.

operations, capable of producing about one-fourth as much service as the planes operated within the country. Assuming that this four-to-one ratio of domestic to foreign operations will continue, by the end of 1948 domestic air carriers will be able to provide roughly 16.5 billion passenger-miles of service within the country and 4.5 billion passenger-miles in international operations.

The Problem of Excess Capacity

It is interesting to compare this domestic capacity of 16.5 billion passenger-miles at a 60 per cent load factor with previous estimates of air travel. Dr. Edward Warner, while serving as Vice-Chairman of the Civil Aeronautics Board, estimated that at a fare of four and a half cents a mile, airlines could expect to receive 6.5 billion passenger-miles of traffic; at four cents a mile, 8 billion passenger-miles; and at three cents a mile, 12 billion passenger-miles.⁷ The Curtiss-Wright study⁸ of air transportation forecast 7 billion passenger-miles by 1950. Dr. Lewis Sorrell, Director of Research for the Air Transport Association of America, expects air travel to equal the volume of rail Pullman business by 1950, with the airlines carrying from 6.5 to 9.7 billion passenger-miles.⁹ If a fare of two and a half cents per mile were placed in effect, A. E. Raymond, Vice-President, Engineering, Douglas Aircraft Company,¹⁰ calculated maximum domestic air travel at 14 billion passenger-miles.

These forecasts are recited, not to show how hazardous predictions in air transportation may be—though it is a fact that whether the prophet uses a straight-line growth curve, a second-degree parabola fitted by the method of least squares, a Gompertz curve, or an ouija board, his result is pretty much guesswork—but to indicate the extent to which air passenger capacity available by 1948 exceeds estimates by expert observers of the 1950 passenger market. It is entirely possible that the airlines may advance the travel clock by several years, but there are good reasons for thinking they cannot do so.

How will the airlines meet the probable situation of excess capacity? To permit load factors to drop below the 60 per cent level, which is roughly the prewar level of occupancy, would sharpen the financial distress of carriers which have purchased equipment on the basis that it would produce a modest profit at 60 per cent occupancy—and this at

⁷ Edward Warner, "Where Next?" *Air Transport*, September, 1944, pp. 32-37.

⁸ McDonald and Drew, *Air Transportation in the Immediate Postwar Period* (Curtiss-Wright Corporation, March, 1944), p. 10.

⁹ Lyon and Sorrell, *Prospects and Problems in Aviation* (Chicago Association of Commerce, 1945), pp. 67-81.

¹⁰ *Ibid.*, pp. 49-56.

early 1945 price levels. (Some airlines now estimate they require 70 to 75 per cent load factors to "break even.") If utilization is reduced so as to maintain load factors at 60 per cent, not only are the earning potentialities of new equipment lowered, but a desirable high frequency of service along well-traveled and competitive routes may be lost. If the industry is presented with this problem several years hence, as I believe it will be, cost analysis will probably favor the reduction of utilization in order to support load factors, but the competitive zeal of airline managements may dictate a different policy.

Further reduction of fares is essential to the development of a mass market, and the public has been led to expect such action, but rising costs and current poor earnings may postpone rate cutting. Recent airline profit and loss statements indicate that passenger fares may have been reduced prematurely,¹¹ and several carriers have already applied for half-cent increases from the present level of four and a half cents a mile. Attempting to fill up empty seats by rapid and drastic rate reductions would indicate only a morbid desire to commit hara-kiri on the part of airline executives, who have merely to look for ominous precedent at railroad experience in the latter years of the nineteenth century.

Quality of Service

More promising avenues of approach to the problem of excess capacity lie along the lines of over-all development of the market for air travel and the trimming of costs. Mr. Damon's statements on air passenger policy emphasized the personalized and luxury concept of service traditional with the airlines. This service is today characterized by swank downtown ticket offices, plush and roomy airplane accommodations, meals aloft, an elaborate system of baggage handling, and other special services. "Day coach" service of the future, as envisioned by C. R. Smith, contemplates the elimination of these frills, perhaps even of the airline hostess. But those who prefer personalized service, de luxe interiors, extra speed, sleeper accommodations, and the like, all of which involve added expense, could have them—at a price. Airlines have available to them in new equipment a wide variety of interior layouts,¹² as well as different ranges of engine power and aircraft speed. These things make possible a flexibility of service not matched by any other carrier and enable the airline to tap all sections of the intercity travel market.

¹¹ The fact that the reduction was brought about in part by the desire of a major carrier to escape the wartime excise profits tax encourages this conclusion.

¹² For example, the interior of the Boeing Stratocruiser (B-377) can be adapted to carry any number from 50 to 110 passengers.

Average Trip Length

In the initial postwar period airlines are apparently concentrating on the development of the long-distance travel market. Most of the newer models in service as well as those on order operate most economically at distances of from 1,000 to 2,000 miles. Even the Martin and Consolidated Vultee planes which are intended to replace the DC-3's are most efficient at a range of about 400 miles, as compared with the DC-3's most effective range of 250 miles. There is no doubt that the new planes will adequately serve the needs of long-distance and intermediate travel. But what of the short-haul market? Prewar surveys of the Civil Aeronautics Board indicated that nearly one-half of all air travelers flew less than 250 miles, though they accounted for only 20 per cent of the passenger-miles.¹³ Three-fourths of all passengers traveled less than 450 miles, accounting for 40 per cent of all passenger-miles. With present aircraft and local conditions, especially at airports, domestic airlines may not feel that this short-haul business is profitable. But they cannot afford to ignore it if they seek to generate mass transportation and maintain load factors.

The Problem of Safety

The most promising means of strengthening public demand for air travel is the improvement of safety. A poll taken several years ago¹⁴ indicated that 25 per cent of those who gave reasons for not traveling by air listed fear of accident as the principal deterrent. Although the airlines are making progress in the field of safety and have within the past year reduced fatalities relative to traffic—fatalities averaged 1.2 per 100 million passenger-miles compared with 2.2 in 1945—the absolute increase of air accidents serves to give the public an incorrect impression of safety, no account being taken of the greater number of planes now in the air. Continual publicity of the actual facts of safety is essential, as well as renewed effort to overcome flight hazards.

A large number of air accidents have recently occurred in the operation of new planes, notably the Constellation and the DC-4. It is claimed that planes due to be delivered in 1947 will be safer, but those familiar with past models insist that it requires considerable time and experience before aeronautical defects are overcome. Though faulty construction of airplanes has been a common cause of accidents, in a large number of cases the operator has been responsible. The drive for added safety in the air must consider the advisability of increasing flight testing of new aircraft before the planes are delivered,¹⁵ and also

¹³ C.A.B. *Air Traffic Surveys*, September, 1940, and March, 1941.

¹⁴ *Tomorrow's Customers for Aviation* (New York: Crowell-Collier Publishing Company, 1944).

¹⁵ In this connection, it might be worth while to point out that the Army Air Forces had an elaborate procedure for flight testing military aircraft which had remarkable

the possible advantages of lengthening the training and check-out time of crews on the new equipment. Without question the technical complexity of the modern airplane necessitates more specialized training than ever the DC-3 required, and the haste of airlines to place new equipment in service should not be permitted to cut short the training period of necessary operatives.

Schedule Regularity

Delay can be as damaging to air travel as danger. Why plan a four-hour air trip in place of a twenty-four-hour train trip if the flight may be postponed for twenty-four to forty-eight hours? Why plan to fly from Boston to Washington when the flight may go as far as Baltimore, find the weather closing in, and drop the passengers off at New York or return them to Boston? Some of the same devices designed to improve safety will also assist schedule regularity. Progress in blind landings and effective traffic control has been made through the recent installation of the Civil Aeronautics Authority's instrument landing system, which uses a localizer and glide beam to guide the pilot, but pressure has developed for commercial use of the army's ground control approach system. Employing radar and high frequency radio, the latter is said to permit landings even when the ceiling drops below 200 feet and visibility narrows to half a mile.¹⁶ Despite budgetary limitations, the Civil Aeronautics Authority is now experimenting with the ground control approach system at three stations, New York, Chicago, and Washington. All-weather flying will be further assisted by new anti-icing equipment, and it is hoped that the use of FIDO, the British fog-lifting device, will be found commercially practicable.

The Airport Problem

The weakest links in our national system of air transportation are our airports, which daily grow more congested. Part of the responsibility will have to be laid at the door of airline managements who, despite familiarity with the airport situation and municipal shortcomings, have multiplied planes and schedules so fast that air terminals and fields cannot possibly cope with the traffic. Companies have been compelled to disperse service in some metropolitan areas through the use of several airports, with consequent duplication of ground forces and facilities and added difficulties in scheduling and connections. Con-

success in working out defects of initially bad performers, such as the Boeing Superfortress. Such testing is expensive and beyond the capacity of a single airline or of a single manufacturer working on a commercial contract, but collectively airlines, manufacturers, and government could create a testing organization which could get more of the "bugs" out of new planes before passengers are taken aboard.

¹⁶ Radar and high frequency radio will also lessen danger of collision along airways whose use is increasing daily as commercial schedules are augmented.

gestion has become so great at some terminals that it is impossible (as well as unsafe!) to add schedules during certain hours, compelling air carriers to resort to less desirable departure times or inferior airports, with consequent loss of revenue and public esteem.

The airport problem is varied and complicated and certainly beyond the scope of this paper, but one or two remarks may be appropriate. Of the 500 million dollar federal aid program, Congress has appropriated only 45 millions for the first year of development, and most of this sum has gone to the larger cities. In view of present building costs, this program can only scratch the surface of airport needs and will still leave many smaller cities without airports for some time to come. Another factor which causes concern is the tendency to go farther and farther away from downtown areas in the development of municipal fields, seriously curtailing the advantages of air transportation in short and intermediate hauls. Centrally located tracts are generally beyond the reach not just of municipal budgets but also of a city's zoning authority. Even at a distance from the downtown area, it may be difficult to assure clear approaches, and with the growth of the number, size, and speed of aircraft, the approach problem is many times magnified. Especially helpful in this connection would be the adoption by Congress of the federal zoning law,¹⁷ which would expedite the local handling of obstructions or the enactment by all states of the CAA's model zoning bill. The fact that more than half of all air accidents occur on landing and take-off and that physical obstructions are frequently involved, is an added reason for a vigorous attack upon the zoning problem.

Development of Foreign Routes

Faced with serious obstacles to the intensive cultivation of the domestic travel market, especially at important terminals, airlines are expending their energies more and more in other directions. Applications have been filed with the Civil Aeronautics Board for extension of routes overseas, to major domestic terminals, to intermediate and alternate points along main lines, even to small cities. In fact a chart of the average carrier's applications for new service reminds one very much of a central switchboard during peak operations.¹⁸

Undoubtedly, the most notable expansion of domestic airlines has occurred in the foreign field. As the result of a series of Board decisions

¹⁷ H. R. 1012 (78th Cong., 1943), an example of federal legislation, would give direction over airport zoning to the Civil Aeronautics Authority, which possesses the required technical knowledge, but still leaves municipalities with the responsibility for enacting suitable ordinances.

¹⁸ Chairman Landis of the Civil Aeronautics Board is reported to have remarked that the Board was tired of carriers concentrating on expansion while the public poured "virulent" complaints into Washington about poor service along established routes. *American Aviation*, December, 1946.

over the past two years, American carriers have been authorized to fly some 177,000 route-miles internationally (compared to less than 60,000 miles prewar), and despite geographic, technical, and political difficulties, have made remarkable progress in initiating service over a large part of this mileage. The length and location of foreign routes granted United States flag carriers appears below:

FOREIGN ROUTE MILEAGE OF DOMESTIC CARRIERS

Carrier	Route Miles		Location
	Domestic ^a	Foreign ^b	
American Airlines.....	11,463	9,066 ^c	North Atlantic routes to London, Berlin, Moscow, and Scandinavia
Braniff Airways.....	3,933	7,591	Mexico City and South America
Chicago and Southern Airlines	2,163	3,693	Gulf ports to Havana, Venezuela, and Puerto Rico
Colonial Airlines.....	1,171	1,600	New York and Washington to Bermuda
Eastern Air Lines.....	8,055	1,957	Miami—San Juan, Puerto Rico; New Orleans—Mexico City
National Airlines.....	2,630	439	Tampa and Miami to Havana
Northwest Airlines.....	6,715	14,641	Chicago to Alaska, Tokio and Shanghai
Pan American Airways.....		101,017	All continents
Pan American-Grace.....		10,447	South America
Transcontinental and Western Air	8,668	20,850	New York to western and southern Europe, North Africa, India and Shanghai
United Air Lines.....	11,409	2,400	San Francisco to Hawaii
Western Air Lines.....	3,249	1,564	Los Angeles to Mexico City

^a November, 1946.

^b October, 1946.

^c American Overseas Airlines.

International service is marked by long flights and for the present by low schedule frequency over most routes. These factors create tremendous problems in the scheduling and utilization of crews and equipment, in the provision of maintenance, and in the attainment of flight regularity. Long flights in varying wind conditions make for arrivals as much as two and three hours ahead of or behind schedule. Such flights may also be tiring for passengers. In such event, should the plane stop and reduce utilization? Or should the airline provide berths and thus restrict its pay load?

Development of these foreign routes has required and will continue to require considerable expenditure on the part of domestic carriers, and it may be some time before the money begins to come back. Load factors presently operated on routes have not been particularly high, and the decision to fix foreign air mail pay at seventy-five cents per ton-mile¹⁹ did not come up to the carriers' expectations. Nevertheless,

¹⁹ In some cases a rate of eighty-five cents per ton-mile has been permitted. At the present time numerous air carriers are attempting to have mail pay placed on a plane-mile basis in order to increase the amount of compensation in the face of declining mail loads.

airlines are pouring planes into overseas travel, and, as estimated earlier in this paper, will within two years have enough capacity at 60 per cent load factors to handle 4.5 billion passenger-miles of traffic. To this must be added the services of airlines of more than thirty foreign nations today operating some 150,000 miles of route. Many of these lines are well organized and will be equipped with late model American and foreign-made planes. At the present time domestic and foreign companies are co-operating by bilateral trade pacts and through the International Air Traffic Association in maintaining schedule and rate agreements. Should this co-operation break down in future years, however, American flag carriers would have difficulty in holding their own against the competition of foreign lines benefiting from lower costs (particularly labor) and large government subsidies.

An interesting move calculated to knit together foreign routes of domestic carriers has been launched by Pan American Airways, in its application, filed jointly with its subsidiary, Pan American-Grace Airways, for approval of an agreement to operate over each other's routes. If this arrangement is approved, a flood of similar charter agreements can be expected which will provide long-range through service, passenger and freight, to any point on the globe. Whether or not the Board will approve the present application, however, is in doubt, since the reciprocal arrangement is contingent upon Pan American's obtaining the cross-country routes in the United States for which it has applied.

Domestic Route Patterns

Other air carriers argue that the major arteries of travel in America are already well certificated, and quote statistics to show that domestic routes now total 90,000 miles as compared with 45,000 miles in 1940. In keeping with its duty to promote an adequate air transportation system, the Civil Aeronautics Board has increased the route-mileage of all flag carriers, sometimes by the extension of a trunk line to a terminal not previously served, or award of an alternate route, but more often by amending the certificate of a smaller carrier to permit the latter to compete with an established trunk line or to form an entirely new intercity route. As the following table indicates, the general result has been to increase the mileage of smaller carriers at a faster rate than that of the principal airlines. Smaller airlines have thus been placed in a position to provide long-haul service, to take advantage of the efficiency of modern aircraft, and to compete on a more even plane with the large carriers.

For their part the transcontinental carriers have taken the initiative in reshaping existing route structures through consolidation so as to

DOMESTIC ROUTE-MILEAGE OF PERMANENTLY CERTIFIED AIRLINES
1940 AND 1946

Carrier	Certified Route Mileage		Increase	
	Dec., 1940	Nov., 1946	Miles	Per Cent
American.....	6,843	11,463	4,620	67.5
Eastern.....	5,822	8,055	2,233	38.4
Transcontinental and Western Air...	5,781	8,668	2,887	50.0
United.....	5,337	11,409	6,072	113.8
Braniff.....	2,774	3,933	1,159	41.7
Northwest.....	2,651	6,715	4,064	153.3
Pennsylvania-Central.....	2,641	3,995	1,354	51.3
Mid-Continent.....	1,915	3,029	1,114	58.1
Chicago and Southern.....	1,421	2,163	742	52.2
Western.....	1,400	4,766 ^a	3,366	230.4
Continental.....	1,273	2,911	1,638	128.7
Inland.....	1,132	^a		
Delta.....	1,091	3,126	2,035	186.5
National.....	964	2,630	1,666	172.8
Northeast.....	869	2,109	1,240	142.7
Colonial.....	324	1,171	847	261.4

^a Inland Airlines merged with Western Airlines.

be in a position to operate new aircraft economically over longer distances,²⁰ reduce administrative costs, and obtain greater flexibility in scheduling. Airlines can now offer speedy nonstop service between major points, as well as skip-stop and multiple-stop service.

Local Service

Efforts of the trunk lines to enter the field of local service have not been signally successful. Although they argue that they have the resources and experience to develop local and feeder operations, and that the chief community of interest of small cities is with larger centers on main airline routes, the Board has felt that such operations can best be developed by local independent companies. As of January 1, 1946, with five of the eleven consolidated area proceedings decided, the Board had certified ten local carriers to operate 11,717 miles of secondary network. If the Board follows the same policy in the remaining cases, more than twenty companies and over 26,000 miles of route will have been certified for so-called "local and feeder" operations. Certificates are temporary (usually three years), and in the Board's words, this experiment in local service will "permit the development of actual traffic experience, nonexistent now, which can be effectively used as a guide

²⁰ *American Airlines, Consolidation of Routes* (Docket No. 932 *et al.*), September 23, 1946. The Board noted that the average stop of DC-4 planes consumed about thirty-five minutes of flight time, or the time required for 135 miles of flight with this equipment; also that these planes showed increased efficiency as the length of flight extended up to 1,200 and 2,000 miles, appearing in the form of increased average speeds and decreased direct flight costs.

in making any future additions to the service which may be warranted."²¹

Since the Board is also required by the Civil Aeronautics Act to authorize operations which are justifiable on an economic basis²² it has carefully sifted evidence as to the travel possibilities of local areas, the financial resources of applicants, probable costs and revenues under rate levels attractive to the public, and the relation between the size of carriers and different route patterns to unit costs of operation, but the results do not provide much basis for optimism. Many of the advantages of air transportation are lost in giving service to the small-city, short-haul market where the value of speed is greatly diminished and costs increase. The situation of these "feeder" routes is not made brighter by the fact that airports at some of the designated points will not permit service at the present time, nor is there yet available to the operators equipment specially adapted to use on feeder lines. It is apparent that some of the applicants in these cases regard the local service certificate as a springboard for entry into trunk-line operations, and in several instances, local operators have been permitted to conduct unrestricted shuttle service between adjacent points on their line, where they are in fact competing with existing trunk lines.²³ One member of the Board, somewhat fearful of the financial results of operation over these secondary routes and of the mail pay which may be required to keep local operators in business, has suggested that, in future decisions, the Board create a few somewhat larger systems, and also determine the extent to which trunk-line carriers can perform local services efficiently and economically.²⁴

Nonscheduled and Charter Carriers

Approximately 500 nonscheduled passenger carriers are registered with the Civil Aeronautics Board, and approximately 350 in the passenger field. The availability of surplus equipment, the release of men from the flying forces, the inability of scheduled airlines to meet demands for air service are among the forces contributing to the mushroom growth of contract carriers. By action of the Civil Aeronautics Authority, effective August 1, 1946, these carriers are now subject to

²¹ *Rocky Mountain States Area Case* (Docket No. 152), March 28, 1946.

²² Section 410 (d) (1) of the Civil Aeronautics Act requires that "the conditions surrounding the operation of any service receiving a certificate should be such as to justify an anticipation that commercial revenues will show a continuing tendency to increase, with a consequent progressive decrease of the carrier's dependence upon the government for financial support."

²³ *Pioneer Air Lines, Inc.* (Docket No. 2057) and *Texas-Oklahoma Case* (Docket No. 337), November 14, 1946.

²⁴ Opinion of CM. Young, *Texas-Oklahoma Case* (Docket No. 337), November 14, 1946.

safety regulation, but the extent of economic regulation which should be applied is still a problem. In all likelihood a new version of Section 292.1 of the Civil Aeronautics Regulations, which provides specific exemptions for nonscheduled operators, will soon be promulgated. Under fire at present are the provisions that a carrier is not nonscheduled if it operates more than ten round-trips per month between the same two points for two consecutive months, and the lack of distinction between nonscheduled freight and passenger operations.

How much of the recent growth of nonscheduled service is of a permanent character cannot be told. A Department of Commerce study indicates that 252 nonscheduled and charter operators flew only 1.6 per cent of the passengers and 1.8 per cent of all air passenger-miles during May and June, 1946.²⁵ Although their fares were roughly equal to those of scheduled airlines and plane-mile costs were lower during the months surveyed, if the certificated carriers can reduce indirect costs as they increase their capacity and coverage of the nation, they can expect to whittle down still further the proportion of traffic of nonscheduled operators. Better planes, greater utilization, more experienced personnel, organizational strength, and high schedule frequency (including the use of extra sections to regular flights) are among the factors favoring certificated carriers. On the other hand, there are limits to the penetration of the nonscheduled market by the airlines, the limits being imposed by small airports, low aircraft utilization, and the need for highly specialized services.

The Problem of Indirect Costs

Rather than dilute their earning power with extensive and marginal operations, airlines should make a concentrated attack on bringing costs down. Within the past two years direct costs have soared partly as the result of wage increases in the industry, but also because of mounting prices for fuel and materials and the high depreciation rate of new expensive flying equipment. Even more astonishing has been the growth of indirect operating costs, which before the war equaled or were slightly less than direct costs, but now come to more than 60 per cent of all operating expenses.²⁶ Such items as ground operations, maintenance and depreciation of ground equipment, passenger service, traffic and sales, and general and administrative expenses have grown at alarming rates. Significant also in the picture of overhead costs is the rise of long-term debt from the negligible figure of 460 thousand

²⁵ "Domestic Transportation," *Industry Report of the Transportation Division* (Bureau of Foreign and Domestic Commerce, Washington, D.C., August-September, 1946).

²⁶ In 1939, indirect costs were 48% of total operating expenses; in 1941, 50%; in 1944, 63.7%; in 1945, 61.7%; and are estimated at 60% for 1946. From *C.A.B. Report No. 2780*.

dollars in 1942 to more than 100 million at the present time, with further increases still to come.

The future economic position of the industry depends to a great extent on its ability to bring indirect expenses back to prewar proportions. Numerous ways have been suggested to accomplish this objective, some of which are worth emphasizing here:

1. Unified air terminal operations, both within the terminal and on the field. Considerable waste now results from each carrier's having its own ground crews, platforms, ramps and other ground equipment; separate meteorologists, passenger and ticket agents.

2. Trimming the frills of passenger service. For example, meals, reputed to cost the airlines \$1.10 each, could be eliminated in all but de luxe long-haul flights.

3. As load factors drop, the elimination of reservations except on de luxe flights.

4. Streamlining of ticketing arrangements, with more tickets being sold at airports and a de-emphasis of costly downtown ticket offices.

5. Baggage handling by passengers except in deluxe service.

6. Interchange of equipment, reciprocal operating agreements.

7. Consolidation.

Consolidation

In the effort to expand aviation services to meet swollen traffic demands, co-operation and consolidation between carriers have been largely forgotten by the airlines. The company loyalty and competitive outlook of airline managers, if anything, surpass the individuality of railroad management. Not a single agreement providing for interchange of equipment now exists, although Transcontinental and Western Air and Delta have applied for approval of an equipment interchange at Cincinnati. Progress in consolidation over the past five years has been relatively slight in comparison with the over-all growth of route mileage. Three acquisitions—that of Marquette Airlines (563 miles) by T.W.A., Mayflower Airlines (125 miles) by Northeast, and Inland Airlines (1517 miles) by Western—represent the sum total of consolidation activity. Although L. Welch Pogue, former Chairman of the Civil Aeronautics Board, recommended in a dissenting opinion that Pennsylvania-Central and Northwest Airlines be merged, the Board majority extended Northwest from Milwaukee to New York.²⁷ The application of American Airlines to take over Mid-Continent Airlines was recently refused on the grounds that the two systems were uncomplementary, and that the tangible benefits of the proposal did not offset injuries to other airlines resulting from diversion of traffic and loss of

²⁷ *Northwest Airlines Case*, 6 C.A.B. 217 (1944).

connections.²⁸ While the Board was apparently on firm ground in this decision, it is hoped that it will follow an examiner's report recommending consolidation of Pennsylvania-Central and Northeast Airlines.²⁹ This proposed merger is only one of a number of promising combinations in the air transport industry.

Who Shall Handle Air Freight?

The general shape of things to come in air freight operations is even more obscure than the outlines of future passenger service. Air freight was originally carried by scheduled airlines on passenger flights together with mail and express, but unlike other traffic, could be held over and accumulated for later flights. With the high passenger load factors and heavy mail loads of the war, the airlines began special all-cargo flights on which freight was handled, but these flights have been reduced in number within the past year. Major airlines have also contracted for special planeload shipments, more or less experimentally.

Most freight at present is being carried in contract operations by the so-called "nonscheduled" operators. Reports indicate that five operators organized in the Independent Airfreight Association now have fifteen planes in service and handled 3,700,000 ton-miles of freight in November, 1946. These operators account for an estimated 55 to 60 per cent of all freight handled in nonscheduled service. A single contract carrier, Slick Airlines, is now reported to be carrying more freight than all certificated airlines combined.

The question of who is entitled to perform freight service is now before the Board for review in the *Airfreight* case. Nonscheduled operators have applied for certification as cargo or cargo-mail common carriers alleging, among other things, that the permission to carry "property" contained in the certificates of the so-called "trunk lines" does not extend to freight. The issue has of course been joined by the trunk lines. The Board will have to decide some of these knotty questions: (1) Should scheduled airlines be allowed to carry freight on passenger ships? (2) Can these airlines carry freight in planeload lots in common or contract carrier operations? (3) Should nonscheduled carriers, or a few of them, have all the freight business, or be allowed to compete with scheduled carriers in the freight field?

How Shall Freight Be Carried?

So far as costs of offering service are concerned, apparently the cheapest means of carrying freight is as by-product on passenger flights,

²⁸ American Airlines, Inc., *Acquisition of Control of Mid-Continent Airlines, Inc.* (Docket No. 2068), September 27, 1946.

²⁹ *PCA-Northeast Merger Case* (Docket No. 2168), Examiner's Report, August 9, 1946.

where practically all direct flight costs are chargeable to passengers and mail. Indirect costs of sales and advertising, ground handling and administration are more considerable, but still small relative to expenses for other types of traffic, especially passengers. Pick-up and delivery service, optional with the shipper, is covered by extra charges. Carrying freight as by-product on combination flights, airlines can probably make money at fifteen cents a ton-mile, possibly at even lower rates. With respect to cargo in plane-load lots, however, the situation is not so clear. Nonscheduled carriers argue that there is no profit at less than twenty cents a ton-mile with present equipment, and this would seem to be borne out by the large numbers of recent failures in the contract carrier field following a rate war which resulted in charges as low as ten and twelve and a half cents a ton-mile.³⁰ The nonscheduled air carriers need limitation of competition in the freight field as much as the scheduled air carriers need the freight business as supplemental revenue.

As freight develops, however, carriage in plane-load lots should become increasingly important. Handling volume freight on passenger flights delays schedules, and the accumulation of freight in late afternoon and evening hours is such as to require extra freight service, scheduled or otherwise. Furthermore, a large part of the freight potential consists of perishables requiring temperature control and special handling not provided on passenger planes. On the other hand, the scheduled carriers have equipment, hangars and facilities, organization and experience useful in freight service, and should not be denied the opportunity to develop the potentialities at least of combination cargo flights.

Other issues directly involved in the *Airfreight* case have to do with possible limitations to be imposed upon freight service. For example, should airfreight common carriers have fixed routes, general pick-up and delivery areas, or be restricted to a particular section of the country? Should certificated areas of operation take into account seasonality of traffic? To what extent is co-operation and interchange of equipment desirable in freight service?

It is not the purpose of this paper to attempt to resolve the points at issue in this case. But in the longer run of events it may be found desirable to handle freight on a national scale, either by joint action of a number of common carriers co-operating through interchange of equipment or operating agreements, or, still more likely, by a limited number of common carriers each operating in all sections of the country. The proposal has also been made that a single nonscheduled ir-

³⁰ Originally some thirty-four nonscheduled freight carriers were in this case before the Civil Aeronautics Board. This number has now dropped to fourteen.

regular-route company be organized by the certificated airlines to handle freight in planeload lots.⁸¹ Such national operation has tremendous advantages of flexibility, economy, and the offering of efficient and comprehensive service to the shipper. The transportation of freight by air suffers even more than air passenger service from the excessive competition of a large number of localized operators.

National Policy

This paper has said nothing about the efforts of ship lines and railroads to enter the field of air transportation, nor the equities, economies, efficiencies, and extravagances of such enterprise. But in the present state of the airlines, these endeavors by surface carriers call to mind the story of the man who wanted to buy J. P. Morgan's yacht. "How much does it cost to run?" the would-be purchaser asked the financier. Morgan snapped: "No one who has to ask that question can afford it!"

With passenger business not yet on a profitable basis, with the gains in express and freight traffic not yet compensating for the large drop in airmail volume, airlines are already asking the Civil Aeronautics Board for higher mail pay. This brings up the problem of subsidy. Should the government continue to nurse the air transport industry along, or should this industry be made to stand on its own feet in the hard competitive transportation world? Should the taxpayers, in making up the deficits of companies, have to pay a premium for poor management and lack of foresight? No, it is time the air industry came of age, that it be compelled as well as assisted by enlightened government policy to put its house in order. Only by so doing can air transportation be made to live up to its very great promise and provide the kind of service the public wants at rates it can afford to pay.

⁸¹ Congressman Hinshaw, of California, made this proposal to the certificated airlines early in 1946. The suggestion was turned down by the carriers because they feared such an arrangement would divert freight from combination flights and might bring antitrust action against them.

DISCUSSION

MARVIN L. FAIR: Dr. Ashton's thoughtful paper offers a fundamental approach to the study of the time interval and cost incident to the movement of goods and persons. Studies of cost and quality of service generally have been related to the problems of regulation rather than to the evaluation and measurement of the economic impact of a more efficient performance of transportation service.

In his discussion of "The Time Element in Transportation" he poses three principal questions; namely:

1. Does time, i.e., speed, have economic significance in transportation service apart from other factors such as availability, cost, and dependability, which can be separated out and measured independently?

2. Why does the time factor have economic significance?

3. How is the economic importance of time made evident?

After assuming that the economic significance of time in transportation is implicit, he proceeds to recite the economic advantages of increased speed in terms of increased value of perishable and style goods, the extension of markets, faster turnover of stocks, reduced capital in goods in transit, and more stability of the distributive process. He recognizes that the demand for speed is one derived from market conditions which vary as to place, time, and stage of industrialization of society. After citing illustrations of higher rates paid for greater speed, an upward sloping demand curve is drawn to demonstrate that the value of speed can be separated out and measured.

In considering the production of transportation service, he recognizes that there are economic savings in terms of added capacity but that the increasing cost of speed beyond a certain point results in a net increase of cost, which supports a U-shaped cost curve for a given type of carrier.

I find myself in general agreement with Dr. Ashton's main thesis. The difference in point of view is confined to certain points of emphasis and interpretation.

I cannot agree with Dr. Ashton that the utility or value of reducing time in transit, although variable in amount, is inevitable. Unlike reduction in costs, reduction of time in transit does not always have value. Increased speed may increase the value of perishables at point of consumption but it is necessary to relate this to the efficiency of refrigeration. Assuming ideal refrigeration, time in transit for some commodities would be of little consequence. Perhaps a better case can be made for the saving in refrigeration costs which speed may make possible. As a matter of fact, a large proportion of vegetables arriving at our principal perishable markets which once arrived in refrigerated cars, now arrive in good condition without refrigeration in motor trucks which can provide overnight delivery. Air transportation promises similarly to avoid refrigerating costs in the handling of perishable cargo. Style goods reaching a "perishable" market at greater speed may indeed have their value increased. The extent of markets for style goods of a given producer can certainly be extended because of speed. The economies in production and social benefits of this development are not explained in the paper.

Fast and adequate communication combined with lower transportation costs rather than speed appear to be the principal factors in the control of market supply and stability of prices. The prices of many manufactured and semimanufactured goods are administered by the manufacturer and tend to vary as to locality of destination, if at all, by the differences in the costs of transportation. At present there appears to be little correlation between the number of markets accessible to a producing area and the speed of competing modes of transportation. For bulk freight such as perishables, farm crops, and fuel, the development of the reconsignment system of the rail carriers makes possible a number of accessible markets and the maintenance of considerable market stability. For some kinds of freight, transportation by rail might provide more available markets than the much faster shipment by air.

The function of storage which in distribution is reciprocal and complementary to the transportation function is not adequately recognized in the author's analysis. The receiver of coal at Toledo, Ohio, or Duluth, Minnesota, is indifferent to the speed of transportation from the mines to his locality because of the practice of the carriers of keeping on hand large quantities of coal in railroad cars or in stock piles. In the movement of grain and other seasonable products of agriculture an important part of the storage function is now performed by the carriers. Here we have a conflict of interest in speed, as we would have in many other types of freight between the user and the producer of transportation. To the user, reduction of lapsed time might give a disutility rather than a utility, whereas to the carrier there is always an advantage of getting the freight delivered at the minimum practical time in order to release equipment. The use of freight cars and vessels for storage in some instances may not be in the interest of economy as a whole, but to the user of transportation service it may relieve him of considerable storage cost. Speed with dependability of service would permit many merchants to reduce inventories and reduce capital invested in goods in transit. Usually these burdens would only be shifted to suppliers and would not necessarily result in a net saving.

It should be also emphasized that receivers of freight are interested in speed, if at all, which will reduce the number of work days intervening while goods are in transit or provide a more convenient hour of delivery. They are not willing to pay for increased speed costs which will result in delivery between closing time in the evening and the opening time of business in the morning or on holidays. Steamship line agents carefully adjust schedules with this fact in mind. In passenger transportation there is more flexibility in this matter, but the hour of arrival remains an important consideration.

The direct impact of increased speed, while significant in the advancement of economy as a whole through the exploiting of resources, extension of markets, division of labor and large-scale production, is hardly comparable to the importance of accessibility and lower costs provided by the improvement of transportation. Dr. Ashton does not make clear whether more speed, though at higher costs of transportation, will promote economic welfare in terms of greater production and consumption per capita or through increased

utility of the present level of production at higher transportation and distribution costs. Perhaps he has in mind that the result would be a composite of the two. In his conclusions mention is made of the effect of increased speed to the situation element in economic rent value. One might wish this point were clarified by a more complete statement.

There is evidence that most travelers and some shippers are willing to pay for speed as well as other quality aspects of service such as dependability, pick-up and delivery service, and special in-transit privileges and services. Even in passenger transportation there are contradictory comparisons in rates with respect to the advantage of speed. For example, the air fare between Wheeling, West Virginia, and Washington, D.C., is approximately \$3.00 below the railroad Pullman fare, including lower berth, whereas, the flight time of one hour and twenty minutes is approximately one-tenth of the railroad time. There are many similar comparisons which might be made in competition of air and rail service.

Dr. Ashton refers to the time element as both quantitative and qualitative and suggests that it should be considered as a unit product in measuring transportation service. Since the demand for speed is a derived demand, a demand curve would be required for each commodity in a given market situation. Presumably the upsloping demand curve which he presents is a composite of many demand curves. The U-shaped cost curve is presented as a net cost curve for a railroad carrier, derived after making allowance for the economy of increased capacity per vehicle and increasing direct cost of train operation. The high cost assigned to lower speeds for a rail carrier is subject to question as most rail carriers can produce the lowest cost service for a given volume of traffic at low speeds. A different cost curve would be required for a change in technology and, as he recognizes, for each mode of transportation. I would also question the steepness of the cost curve as it swings upward for higher speeds because it is possible through reduction of delays to reduce the over-all lapsed time between shipper's door and receiver's door without increasing the maximum speed of the vehicle between terminals. By evening out the line haul speed through elimination of steep grades, intersections, etc., and the reduction of terminal delays, great savings in time may be obtained at lower cost in producing the service. Scheduled freight train operations which in general have come to supplant tonnage train operations have served to increase both yard and line capacity of the railroads. Furthermore, the adoption of prior classification in the make-up and movement of trains has greatly reduced the number of terminals where the trains are broken up and switching operations are required. This has served to increase average train speed at reduced costs of operation. The Maritime Commission's studies show that the time lost and high costs of port operations are important, if not the most important, obstacles to the revival of domestic shipping. The prewar port costs of the coastwise lines amounted to 45½ per cent and at present with increased stevedoring costs they are approximately 60 per cent of the total operating cost.

The economic gain of increased speed to the carrier does not lie in the

direction of increasing maximum route speed of present equipment over the existing way or route because of the limitation of the capacity of the equipment and plant as a whole to permit increased speed. As a matter of fact, a carrier tends to set up schedules providing for the maximum practical speed of vehicle movement. Rather, it lies in the direction of reducing restricted speed areas and in the application of advanced technology and improved methods of construction and operation of power, vehicle, and way to make increased speeds possible. Several American railroads traversing narrow mountain passes increased way capacity by electrification which permitted higher speed of train movement in lieu of investment in additional trackage.

The major economies of the increased speed are primarily: (1) increased capacity of way and vehicles without increasing the extent of the plant in terms of number of tracks, size of terminals, and number of vehicles; and (2) reduced labor costs per ton-mile or passenger-mile of transportation performed. The speed of general cargo vessels as represented by the C-2 and C-3 vessels constructed by the Maritime Commission which are the standard postwar vessels, represent an increase in speed of approximately 35 to 50 per cent over the standard prewar dry cargo vessels. Some foreign trade American flag lines will have the average speed of the fleet increased from approximately ten to fifteen knots per hour where C-2 and C-3 vessels are exclusively employed.

If a steamship line employed fifteen vessels at the speed of ten knots per hour to maintain its prewar schedule involving a 15,000 mile round trip voyage and calling at twelve ports, obtains a postwar fleet of vessels which can average at least fifteen knots per hour and with no change in port time, the same schedule could be performed by ten and one-half ships. This assumes 40 per cent of prewar time was spent in port. The effect of this increased speed is to step up the capacity of each ship to 130 per cent of its prewar predecessor. These C-2 and C-3 vessels have substantially greater cargo loading capacity and require a slightly larger crew. The investment per vessel is substantially higher. Although the investment per ton capacity loaded may be slightly higher, the number of crew per ton-mile capacity is much less for the faster and larger vessels. It is therefore not out of line to expect the faster postwar vessel in this instance to increase the earnings per vessel some 30 per cent. Assuming 60 per cent of average utilization of the ship's cubic and deadweight capacity, and \$8.00 per revenue ton as the spread between direct cargo expenses and fuel costs and freight rates, it is possible for a fifteen-knot ship to earn an added profit of several hundred thousand dollars in one year because of the increased speed alone. If this hypothetical fleet of vessels reduced the time in port from 40 per cent to 20 per cent of the round trip voyage time, the number of vessels required to maintain the schedule might be further reduced from ten and one-half to eight resulting not only in a savings of over 20 per cent in the investment in ships and crew hours per ton-mile of service, but also adding to the operating income per vessel of at least \$200,000 per year. Because of the reduced time between ports the fast vessel has a competitive advantage which, assuming rates to be the same, will attract traffic and insure better utilization of capacity.

The economic advantage of improved methods of terminal operation was demonstrated during the war in the handling of military cargo at our principal ports. The volume of exportation possible during 1944, the peak year of movement to the European theatre, was essentially determined by the minimum voyage turnaround which could be obtained for the limited number of cargo vessels available. To maximize the transportation service to be performed by these vessels, the volume of military cargo was concentrated largely in the principal North Atlantic ports from Boston to Hampton Roads and New Orleans, and in these ports the operation was confined so far as possible to the best available facilities. From the standpoint of transportation equipment, the limiting factor was neither the railroad facilities serving a port nor the potential capacity of all general cargo facilities in the port. Most of the latter facilities were obsolete and could not provide for an expeditious transfer of cargo between ship and shore. At times the supply of stevedore labor rather than ships was the limiting factor. The objective was to obtain maximum flow by the most efficient utilization of the limited number of ships, the limited number of the more adequate terminals, and the supply of labor. Among the measures which were employed to obtain this result was the control of the delivery of freight by rail and motor truck to a port area to avoid conditions of congestion such as were experienced in World War I. This was effected by the permit system put into use with the co-operation of the Office of Defense Transportation, the War Shipping Administration, and the Armed Services. At certain ports, particularly where army or navy traffic was more or less concentrated, the increased yard capacity was developed at the port which further served to even the flow of delivery to the waterfront.

In addition to these practices to even the flow to the waterfront, the Armed Services put into effect methods of packing and handling cargo which greatly increased the speed of handling at the ports, and which in turn increased the utilization of vessels and labor which were in short supply. These measures included preparation of shipments into unit loads at inland depots, the employment of pallet platforms to handle the unit loads intact between depot and vessel and sometimes between inland depot and disposal point in the foreign theatre of operation and the working out of prestowage plans for both terminals and ships. These measures all contributed to the maximum mechanization of waterfront operations which was effected through the use of lift trucks, tractors, trailers, and cranes, and the employment of work-management methods. It must be borne in mind that the Armed Services, almost without exception, selected the most adequate waterfront terminals at the respective ports from the standpoint of transportation access, cargo handling space, and vessel berthing capacity.

Requirements for military exports were stepped up rapidly early in the year 1944 in preparation for the invasion of Europe and the expansion of offensive operations immediately following. In January, 1944, before the introduction of improved methods of controlled flow of traffic and cargo handling at the terminals many of the waterfront facilities were being worked at near-capacity. As a result of the improved methods, these terminals per-

mitted the Armed Services to meet the increased demands without the need of resorting to less efficient facilities, which was essential to obtain a minimum turnaround time of the available cargo vessels.

A review of the army operations through stevedoring contracts for twelve months of 1944 shows an interesting correlation of vessels and tons loaded and straight time stevedoring costs. During the twelve months' period, January, 1944, to December, 1944, inclusive, the number of ships loaded increased from 231 to 369 per month, an increase of 59.7 per cent. The amount of measurement tons loaded increased from 1,701,000 measurement tons in January to 2,810,000 in December, 1944, an increase of 65.3 per cent. To increase the utilization in terms of vessels and railroad equipment, a very intensive use of waterfront facilities was required. However, with improved cargo handling equipment and methods, this increase in utilization was accomplished without added costs. The average cost of stevedoring steadily declined from \$1.49 per ton straight time to \$1.35 per ton straight time in December, 1944, a decrease of 9.4 per cent.

Significant results in the advancement of the economy through speed of transportation may be expected especially if the time element is considered to be the lapsed time for the over-all transportation movement from door to door in both freight and passenger service and if due allowance is made for progress in technological and managerial efficiency. Enlarging the capacity of bottlenecks to sustain speed in a transportation route has a great economic advantage in carrier operation and may serve a most important necessity for increased capacity during local or national emergency.

Dr. Ashton has clearly set forth the basic importance of the time element in transportation and has raised a number of questions which merit careful consideration and study by transportation economists.

ROBERT W. HARBESON: Nowhere is the old adage to the effect that time is the essence of all things more true than in the operations of transportation. A minute of time saved in transportation when multiplied by millions of daily movements results in vast economic gain to both suppliers and users of transportation service. It is not surprising, therefore, that in the historical development of transportation the traveling and shipping public have attached an importance to increased speed second only to that attached to reduced costs and rates. This has been especially true since the development of air transportation, because speed represents the greatest advantage of that agency of transportation as compared with others.

One point made by Dr. Ashton which I believe deserves added emphasis is that, within limits, increased speed reduces transportation costs by permitting more intensive utilization of plant and equipment, or, stated otherwise, by enabling a transportation enterprise to conduct a given volume of business with a smaller investment in plant and equipment than would otherwise be necessary. The saving arises from the fact that certain important items of cost, notably interest on investment and a portion of depreciation and maintenance expense, vary with time rather than with use, and increased

speed results in these costs being spread over a larger number of ton-miles and passenger-miles in a given period of time than would otherwise be the case. On the other hand, of course, increased speed results in a proportionate, or more than proportionate, increase in other items of transportation cost, especially power costs, which may or may not outweigh the saving arising from more intensive utilization of facilities. The net result, as Dr. Ashton points out, is that total unit cost declines with increased speed over a certain range and then increases.

As we should expect, air transportation, by reason of its great advantage in speed, plus technical factors which permit aircraft to be kept in use long hours per day and per year, enjoys the benefits of intensive utilization of equipment to a much higher degree than do surface carriers. A study made by the Brookings Institution showed that in 1942 the planes of domestic air lines averaged 464,000 miles per year. This was 3.2 times the average mileage made in that year by sleeping and parlor cars, 6.6 times that made by other passenger train cars, 6.1 times that made by Class I intercity busses, 9.7 times that made by Class I trucks and 26.3 times that made by freight cars. In order to emphasize the significance of this intensive utilization of aircraft the study points out that a mere 1,600 planes, carrying an average of twenty-eight passengers each, in service ten hours per day and flying at 200 miles per hour could produce 32 billion passenger-miles per year, a number equal to the total made by all intercity common carriers by rail, bus, and air in 1940. It may be added that planes recently placed in service, or soon to be placed in service, are expected to average more than one million miles per year, or more than twice the mileage upon which the comparisons in the Brookings study were based. The point which I wish to stress is that this high degree of utilization of equipment is one of the most potent factors reducing the cost of air transportation relative to other types of transportation.

The importance of the time element as a factor in cost is reflected in the fact that four of the nine components in the Bureau of Railway Economics index of efficiency, selected from the measures of railway performance compiled by the Interstate Commerce Commission, are based in whole or in part upon this factor. The components of the index which are based wholly on the time factor are car-miles per freight car day, freight- and passenger-locomotive-miles per locomotive day and freight train speed, while gross ton-miles per train hour reflects both speed and load. A great deal of effort has been devoted to improving these performance factors over the last quarter-century, with rather impressive results. Between 1920 and 1945 car-miles per freight car day (serviceable cars) increased 82.5 per cent, freight-locomotive-miles per locomotive day (active locomotives) increased 33.0 per cent, passenger-locomotive-miles per locomotive day (active locomotives) increased 43.2 per cent, freight train speed increased 52.4 per cent and gross ton-miles per train hour (which, of course, reflects both load and speed) increased 148.3 per cent.¹ It is scarcely necessary to point out that the high level of performance

¹ There is a slight error in the figures for freight-and-passenger-locomotive-miles per locomotive day arising from the fact that switching mileage of road locomotives was included in 1945 but not in 1920.

reflected in these factors during the war contributed in an important degree to the ability of the carriers to handle the abnormally swollen traffic load with a minimum increase in facilities and without serious breakdown or delay. The performance factors just mentioned showed continued improvement during the period 1940 through 1944, except freight train speed which declined 6 per cent due largely to traffic congestion. Likewise, passenger train speed declined 4 per cent during this period. In this connection it should be pointed out that the marked improvement in various performance factors during the period 1940 through 1944 is due in part merely to the heavy volume of traffic and only in part to improved plant and managerial efficiency. Conversely, the slight decline shown in a number of performance factors between 1944 and 1945 may be due largely to the decline in traffic volume during this period.

The measures of railway performance just referred to are based upon elapsed time between terminals, including all stops and delays, and do not measure the speed of equipment while in motion. It is important to recognize that as much, or more, can be accomplished in saving time in transportation by keeping equipment moving for as large a proportion of the time as possible, that is, by reducing delays and idle time to the minimum, as by increasing the speed of equipment while in motion. The *Freight Traffic Report* of the Federal Co-ordinator of Transportation contains interesting data illustrating this point. Although now thirteen years old, these data are the most comprehensive available and are still worthy of notice.

The Co-ordinator made a study of all carload freight terminated on December 13, 1933. Based on an average haul of 376 miles, an average of 144 hours elapsed between the time a car was placed for loading at the shipper's platform and the time it was released by the consignee after unloading. Of this time 68 hours, or 47 per cent, was spent in loading and unloading, 53 hours, or 37 per cent, was spent in origin, intermediate, and destination terminals, and only 23 hours, or 16 per cent, was spent on the road. Starting with a speed while moving of perhaps 40 miles per hour or more the average road speed was reduced by stops and delays to 16 miles per hour. Terminal delays further reduced this speed to an average of 5 miles per hour for the time during which the cars were in the carrier's possession. Finally, delays in loading and unloading reduced the over-all speed between the placing of the cars for loading and their release after unloading to 2.6 miles per hour. The Co-ordinator attributed this poor showing to voluntary restrictions on road speed, infrequent schedules and consequent delay in making connections, and frequent classification and interchange of cars.

By contrast the motor trucks covered in the Co-ordinator's study reported an average elapsed time of 24 hours door to door for an average haul of 356 miles, or an average speed of 15 miles per hour. This is three times the speed shown by the railways for the portion of the elapsed time during which the cars were in their possession. Hence it is not surprising that in response to a questionnaire issued by the Co-ordinator saving in time and store door delivery were the two reasons most frequently mentioned by shippers for

preferring truck transportation against rail. The water carriers reporting to the Co-ordinator also made a favorable showing as compared with rail. The average speed, including loading, transit and unloading, and calculated in land miles, was 6.8 miles per hour for all reporting water carriers, ranging from 3.6 miles per hour on inland waterways other than the Great Lakes to 10.1 miles per hour for the Atlantic and Gulf carriers. It must be emphasized again that the foregoing data are for the year 1933. This study of the Co-ordinator is referred to here because it is the only systematic study which makes clear the difference between speed while moving and speed measured in terms of elapsed time, which throws light on the causes of delay and idle time in transportation, and which compares the performance of different agencies of transportation with respect to the time factor.

While the Co-ordinator's emphasis on the importance of terminal delays in reducing over-all speed of movement referred primarily to rail carriers, the same diagnosis is applicable in varying degrees to the other agencies of transportation. Thus street traffic congestion and inadequate parking space seriously delay motor truck collection and delivery service in large cities. The result is higher costs of operation, since the larger part of the motor carrier costs in collection and delivery service vary with time rather than distance, and slower over-all speed between shippers and consignees. A study made by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission covering the collection and delivery service of a number of motor truck operators in Southern Territory in 1943 showed an average speed while running of 10 miles per hour and an over-all speed, including stops and delays, of slightly over 4 miles per hour. A similar study of collection and delivery operations in Western Trunk Line Territory in 1944 showed an average speed while running of 8.5 miles per hour and an over-all speed of slightly more than 3 miles per hour. The effect of traffic congestion and inadequate parking space is illustrated in extreme form in an article in a recent issue of *Fortune*, reporting the results of a study of a typical collection and delivery truck operating on Manhattan Island. This truck covered only four miles in an eight-hour day and was able to deliver only thirty-five of the fifty shipments making up its load.

Likewise it is scarcely necessary to point out that over-all speed in air transportation is reduced by the time required to transport persons and goods between the downtown sections of large cities and the airports, which must ordinarily be in outlying areas where the large amount of land required is available. The time required for this operation now averages about forty-five minutes in eight of the largest cities, or about one hour and a half for both ends of a trip. The growth of cities and the growth of air transportation may increase the time required for this service in some instances, by making necessary the development of new airports still farther from the downtown sections. Furthermore, in addition to delays and cancellations occasioned by adverse weather conditions, the time required by planes in descending is sometimes greatly increased by airport congestion, which requires the "stacking" of planes until landing space is available.

One writer states that the time required in terminal operations is such a

large proportion of the over-all travel time by air on short runs that cutting in half the time in the air between terminals on these short runs, by using more expensive planes capable of higher speed, might not reduce the over-all time sufficiently to justify the extra cost. Another writer points out that saving twelve minutes in terminal operations is equivalent to an increase in air speed from 200 to 250 miles per hour on the Washington to Newark, New Jersey, air route.

My final comment concerns Dr. Ashton's analysis of the demand schedule for speed. He states that "the demand price for transportation at low speed will be low itself, and a higher price will be paid for high speed transport." Therefore he concludes that unlike ordinary demand schedules the demand schedule for speed has an upward slope. I seriously question the correctness of this conclusion. It seems to me that transportation at various levels of speed does not constitute a single homogeneous service, but rather a number of different services each with a corresponding demand schedule of the usual sort. If this view is correct, the points on Dr. Ashton's upward sloping demand schedule really represent points on different demand schedules for different levels of speed. This conclusion, I believe, is suggested by the implications of Dr. Ashton's treatment of the economic significance of speed in the earlier portion of his paper, as well as by the recognition of product and service differentiation in the modern theory of demand.

HAMPTON K. SNELL: The principal observation to be made concerning Dr. Edwards' paper is that it is primarily a discussion of fundamentals, definitions, practices and examples of approach to transportation cost analysis. In his report and in footnotes he quotes frequently from the famous names in transportation. With such definitions and fundamentals this speaker has little dispute.

After extensive reading of literature on the subject, including statements from the railroad industry, the conclusion seems justifiable that the railroad and highway cost groups have no fundamental objections to the broad objectives of cost analysis, as described by Dr. Edwards. Industry does object to some of the methods and to the rigidity and restrictions, actual or implied, if such analysis is carried to logical conclusions.

The railroad industry has been among the most extensive users of cost accounting and undoubtedly will not only continue to use but will increase cost analysis usage. Evidence indicates that other forms of transport, principally highway and airline, are making and will make extensive use of cost methods.

The author has examined the study entitled, "Rail Freight Service Costs in the Various Rate Territories of the United States,"¹ which is probably as complete an exposition of cost analysis for railroads as exists. The one-hundred-and-one objections and criticisms of I.C.C. methods included in that volume were studied with particular interest. Almost without exception, they

¹ Senate Document No. 63, 78th Cong., 1st sess. Letter from the Chairman, I.C.C., transmitting in response to Senate Resolution No. 119 certain information on rail freight service costs in the various rate territories of the United States.

were concerned with technical procedure; and with minor points—minor in the sense that they do not affect objectives or basic conclusions in cost analysis. Concerned often with definitions and with criticisms of statistical methods, they included such things as insufficient samples; the use of one or two railroads as representative of all railroads in a given territory, the application of general averages which might not be usable on individual special carriers, the difficulties of comparing data in the various territories, and many other such items.

Of considerable interest is an analysis in the *Quarterly Journal of Economics*, entitled, "Out-of-Pocket Cost in Railroad Freight Rates," by G. Lloyd Wilson and Joseph R. Rose.² Such discussion of definitions is valuable for the purpose of clarifying problems and bringing to the attention of regulatory authorities the usable terms and definitions of economic theory. The author agrees with the major conclusion of that paper, that Edwards' procedure confuses average variable cost with marginal cost, but wishes to point out that the end result is so nearly the same by either presumption that for practical purposes either can be used.

In the present period of rapidly rising costs, increasing competition, and political and economic rate cases, the necessity of thorough cost analysis is, of course, obvious, and in succeeding periods of readjustment and "shake-down" of new rate structures and levels cost procedure must be at its best.

The United States finds itself at the moment in the anomalous position of having two of the major forms of transportation urging the Interstate Commerce Commission to raise rates of railroads in order that the rail carriers' competitors may continue to ensconce themselves under the umbrella of rail rates, else these competitors may operate in general at a loss or, in the instance of the coastwise steamship operators, perhaps not operate at all. The Edwards formula has been under fire from the truck operators on the assertion that insufficient weight is given to certain factors of railroad joint or variable costs. The claim is made that less-than-carload costs thus appear too low and the trucks find rate competition more difficult. For two subsidized forms of transportation to attempt to raise a competitor's rates when both have been previously highly selective of only the best traffic appears to the rail lines to be stretching the virtues of cost determination principles.

These and other similar objections bring to mind some fundamental problems of rate making and cost analysis which go beyond mere questions of definitions and procedure. When the subject of carrier valuation received its first emphasis in the nineteenth century, the railroads were virtually a monopoly. The theory of valuation upon which the railroads and the federal government lavished scores of millions of dollars can be summarized in simplified form as: "Determine the fair value of carrier property and set the rates as a reasonable return upon that value." Before the valuation proceedings were completed the whole picture of transportation changed from scarcity to surplus and today, in the estimation of the author, the situation is such that formal valuation is almost a dead issue. How can even a Department of

²"Out-of-Pocket Cost in Railroad Freight Rates," *Quarterly Journal of Economics*, August, 1946, p. 548.

Justice economist apply a monopoly price theory to the most competitive price structure in the United States? If this premise is correct or if valuation is chiefly a subject for academic discussion, then it seems logical that some of the importance of the methods and minutiae of cost analysis may also be questioned.

Studies made by the Railroad Committee for the Study of Transportation indicate, for example, that an airline passenger actually pays in his air transport rate less than five cents for the use of passenger facilities at La Guardia Airport, or $\frac{3}{10}$ of 1 per cent of passenger revenues, the balance of the high terminal cost being borne by the taxpayer. The five cents is just one-half of the charge for using the spectators' balcony. Evidence is available to indicate that for some small airports the airlines contribute less to total expenses than do the pay toilets. Of what significance is exact cost analysis of competitive passenger service under such farcical conditions?

The recently published Harvard study of air terminal costs³ found management and cost determination practices of airports much in need of improvement and advocated prompt installation of an adequate fee system to begin to reimburse the public and to bring "costs" of air transport closer to reality. As air freight matures this question of costs will become perhaps even more important than for passengers.

How valuable is the near-exact art of cost analysis when attempting to settle questions involving inland waterway competitive rates? It may be able to tell the railroad or truck line that the low rates forced by allegedly cheap water transportation do not represent full or even out-of-pocket costs, but the fundamental question of requiring the barge operator to repay some part of the public expense incurred in his behalf and to reflect such charge in his rates or costs remains unsettled.

A principle emphasized by the railroad industry in discussing cost analysis is that no direct relationship necessarily exists between an actual cost and the rate that must be charged to obtain or keep the traffic. As long as unused capacity exists, as long as the possibility of reducing costs by securing greater volume persists, as long as unequal costs exist between similar carriers—all transport forms will insist upon that principle.

This competitive situation of the railroads was summarized by the author before the American Economic Association transportation section a year ago in some brief remarks upon the problems of rigidity experienced by one carrier without equal application against competitors. These rigidities take the general forms of regulative restrictions, of make-work labor regulations imposed by both unions and government, financial restrictions resulting from adverse economic conditions, and unwise regulatory and legislative policies such as discriminatory social security laws, the managerial difficulties inherent in organizations of the mature age of the railroads, and subsidies granted to competitors.

A typical cost analysis problem is that of rail passenger traffic. The whole question of passenger transportation by whatever means is a complex one and

³ *Terminal Airport Financing and Management* (Graduate School of Business Administration, Harvard University).

the author is inclined, after a review of the history of passenger transportation, to conclude that with the possible exception of certain bus lines, no commercial form of passenger transportation has ever been consistently profitable or financially successful. A railroad officer was recently quoted as anticipating for railroad passenger service for the year 1947 a deficit of 400 million dollars. The published statements of the Bureau of Transport Economics and Statistics of the I.C.C. have repeatedly referred to the over-all deficit incurred by railroad passenger transportation. Such deficits must obviously be met from other earnings, primarily from freight.

Passenger traffic in the early twenties was profitable; the causes of the later deficits were: (1) competition of private motor cars, made possible by government-built roads; (2) competition of commercial highway carriers, which have not been subjected to all of the costs incurred in their behalf by government; (3) competition from airlines with airports and navigation aids provided without cost or at a minute fraction of total cost; (4) a passenger rate structure which did not promptly reflect changed competitive conditions; (5) the depression of the thirties.

The relation to the subject of cost analysis is simply this. On a national scale and granting that cost analysis as practiced by Dr. Edwards and his associates is sufficiently close to actuality to reflect the true state of affairs, shall we conclude that the railroads should abandon passenger service and leave the field to other forms of transport? Faced as they are by necessity of purchasing large quantities of new and expensive equipment, without the aid given to their competitors by government and in a financial market not receptive to railroad securities, the railroads may justifiably hesitate to continue in a seemingly fruitless field of endeavor. Individual trains have proved consistently profitable, and for the foreseeable future probably can continue to be. The losses, however, are incurred chiefly in the sleeping car business, on the unprofitable accommodation and local runs, because of too many trains on competitive routes, seasonality of traffic, and the necessity of maintaining blocks of stand-by equipment unused much of the time.

Mr. John Barriger, recently elected President of the Monon Railroad, a line which is situated in about as difficult a competitive location as it is possible to conceive, both for passengers and freight, has publicly stated that in his estimation any passenger traffic which will repay a major part of out-of-pocket costs is desirable on his railroad. He believes the passenger cost formula of the I.C.C. is too restrictive and concludes apparently that the advertising value, the accommodation to the public, employee morale, and general stimulus to business are all factors more important than the rigid restrictions imposed by cost analysis. Railroads in general do not agree that costs present as high a percentage of variability as the I.C.C. maintains.

As an indication of some of the practical difficulties of present I.C.C. cost analysis, Dr. Edwards states that the products of mines "generally moved at rates . . . 10 to 20 per cent below their fully distributed costs." It must be noted that the consistently most prosperous railroads in the United States are the coal and iron ore carriers. Yet manufactures and miscellaneous, whose rates "averaged 20 to 30 per cent above their fully distributed costs," are among the thorniest of railroad problems in attempting to make a profit.

The railway express business is in a position very similar to that of the passenger service, confronted with high labor costs; increased inefficiency of workers, almost unrestricted competition from other transport, and rigidities of rate structure.

An important aspect of the present-day cost analysis problem of the common carriers is shown by a statement from a Spokane shipper, as an example of many others, to the effect that if the rail or truck rates on merchandise shipped by his organization passed a certain point, his knowledge of his private truck line costs indicated that he could afford to purchase additional trucks and use his fleet either from Puget Sound or, if necessary, on the long haul from the East or Midwest. Traffic departments of large merchandising organizations such as Sears Roebuck, Procter and Gamble, the Great Atlantic and Pacific Tea Company, and others investigated by the author, watch transportation costs very closely and if convinced that rates of the transportation agencies they use pass a certain point they either bring pressure for readjustment or place their own transport lines in operation.

This actual and potential threat of unrestricted private operations is also evidenced by the inland waterway barge lines, operated by steel, oil, coal, and other bulk shippers and will undoubtedly appear in the not too distant future if airline operating costs and characteristics warrant operation of private lines.

The conclusion seems inevitable that while costs should be an important factor in the rates of common carriers, the force of unequal competition constantly whittles away at both rates and operating techniques.

Interstate Commerce Commission decisions over a period of years—some 1,800 citations on cost analysis appear prior to 1941—show that the Commission recognizes the necessity of considering other factors. Commissioner Mahaffie in a dissenting opinion (216 ICC 291, 357) stated: "The principle that a carrier service may not lawfully be afforded at less than full cost, including depreciation, if applied generally would terminate a great many carrier operations. In my judgment, it is not a sound principle."

In a passenger fare case (214 ICC 174, 182) the Commission stated: "although we have given careful consideration to the significance of the costs shown of record, we are not bound by superficial comparison of average costs and fares for a particular year or period. Cost must be considered in all of its aspects and then as only one factor in arriving at a judgment of what are reasonable fares. . . ."

In the *Fifteen Percent* case (226 ICC 41, 77) the Commission stated: "Important as is the cost to the carriers of performing the service, we have never regarded it as a sole and controlling factor in determining whether rates are just and reasonable. . . ."

In the *Lake Coal Demurrage* case (232 ICC 735, 773-774) the Commission pointed out that if the transfer charges were adjusted at each port and over each facility in accordance with exact cost of operation, the cumulative effect would lead to the handling of most of the traffic by the lowest cost facilities, a result which would be undesirable, not only to the carriers, but to the transshippers and the steamship operators. Many businesses would go out of operation with consequent loss to society.

Another and very important phase of cost analysis brings up the question of the comparability of costs of various forms of transportation. The Interstate Commerce Commission in a report to the President of the United States on certain aspects of the proposed Lake Erie-Ohio River Canal (235 ICC 753, 755) stated: "It may be noted . . . that a comparison of railroad rates with the cost of providing transportation service by water does not involve like cost elements. The railroads have to provide and maintain their own rights-of-way and to pay taxes for the support of government functions, but no such burdens would be placed on users of the waterway under the plan."

In a January 13, 1947, statement, Mr. R. V. Fletcher, President of the Association of American Railroads, noted that the proposed federal budget presented by President Truman called for appropriations totaling nearly 800 million dollars for highway, waterway, and airport facilities, but nothing for the railroads, which transported more than 90 per cent of the military freight and more than 97 per cent of the military travel moved during the late war. Mr. Fletcher made it clear that the rail carriers are not asking for federal aid, but believe that if equality and comparability of transportation are to be achieved that water and air transportation begin to make some repayment of their subsidies, even as the law required previously publicly-aided railroads to do.

The railroads do not object to the theory that cost is an important factor in rate making but they do object to the rigidities, restrictions, and attacks which seem inevitably to follow the determination of a specific cost or application of a particular formula. A cost formula was recently developed by an unofficial committee of expert railroad accountants. Why will that formula probably never be published? Because the consensus of the industry was that no matter how unofficial or experimental it was, once it appeared in print every demagog, every head-line hunting politician, every crusading bureaucrat, every competitor, and every traffic manager who could possibly benefit by using any part of it for attack, would promptly drag it before every commission and court in the land and try to freeze it into some rate structure.

Every other form of transportation has greater freedom, less regulation, less public responsibility and attention than the railroads. The railroads think it about time at least equal attention be paid to the true and total costs of air transportation, to the national farce of pouring billions of dollars of taxpayers' money into inland waterways and sanctimoniously calling it cheap transportation. Highway programs should be critically examined, and we should have some complete cost analysis for a change to see if free waterways and three-cent airlines are what they advertise!

Despite all of the efforts of such zealous analysts as Dr. Edwards and his colleagues, the result in rates will be only partially usable until the fundamental difficulty of obtaining equality of competition and opportunity is achieved. It can be attained only by a drastically revised national policy.

JAMES C. NELSON: The air transport industry faces both the problem of digesting the enormous expansion of scheduled services during the past eighteen months and the problem of absorbing the several hundred new com-

mon and contract carriers resulting from a tremendous surge of entrepreneurial activity since the end of the war. Professor Leonard has given primary attention to the former problem and has ferreted out a number of factors contributing to the current difficulties of the scheduled airlines: rapid intensive and extensive growth as additional and new types of equipment became available; emerging excess capacity; marginal foreign and domestic route extensions; congested airport facilities; and "mushroom" growth of nonscheduled lines.¹

Without undertaking to comment on all these sources of present or future difficulties, the observation is pertinent that the unprofitability and poor service of the scheduled airlines to which so much attention has been given in recent months is probably more the inevitable result of rapid growth in services and market exploitation in a period of inflation and general reconversion than of excess capacity. Load factors lower than the wartime levels when scarcity prevailed were to be expected. The equipment expansion programs of the airlines are still far from complete, and any overoptimism in the original placing of orders is still subject to correction through the expedient of order cancellation. To the extent capacity has outrun traffic, the demand at current or lower rates should soon catch up.

To restore profitable operations, the scheduled airlines will also have to control the costs not associated with excess capacity more successfully than in past months, as was emphasized by Dr. Leonard. Will the scheduled airlines have a full incentive to take the necessary measures? Much will depend upon action by the C.A.B. with respect to the petitions of several lines for increases in mail pay beyond their present levels.²

The tremendous growth of nonscheduled operations and the proliferation of firms during the past eighteen months have significantly altered the air transport pattern; extended the possibilities for workable competition, at least in the air cargo field; and expanded air cargo traffic and specialized types of passenger operations beyond most expectations. Not only have the veterans' aspirations represented by these enterprises created widespread interest, but they have appeared to some as a threat to the scheduled airlines and the previously established air transport pattern of a limited number of carriers and fixed routes. Whether or not these fears may be justifiable, a problem of consider-

¹ The term "nonscheduled" airlines or air carriers is used here and elsewhere in this paper to indicate all types of interstate common carriers of passengers and/or cargo by air which have been exempted by the C.A.B. from economic regulation under the Civil Aeronautics Act of 1938, particularly from the certificate of public convenience and necessity requirement under the exemption granted on December 7, 1938, by Section 292.1 of the Board's Economic Regulations. It also includes contract carriers by air now not subject to economic regulation under that Act. Perhaps a preferable designation is "noncertificated air carriers," a term used by the C.A.B. to describe all air carriers which do not hold a certificate of public convenience and necessity issued by that agency in its "Economic Regulations Draft Release No. 14," November 22, 1946, proposing further revision of Section 292.1 of the Economic Regulations.

² As of January 17, 1947, the following domestic scheduled airlines had petitioned the C.A.B. for increases in their respective mail rates: Pennsylvania-Central Airlines; Chicago and Southern Air Lines; Braniff Airways; Western Air Lines; Colonial Airlines; Northeast Airlines; Continental Air Lines; All American Aviation; and Pioneer Air Lines. Of these, the first four receive a service mail rate of 60 cents per ton-mile, whereas the remaining five receive rates per plane-mile varying with their financial needs.

able complexity and difficulty has arisen. What role should the nonscheduled carriers be allowed in the changing air transport system?

One can readily agree with Dr. Leonard's observation that "the general shape of things to come in air freight operations is even more obscure than the outlines of future passenger service." Nevertheless, from the reports filed by nonscheduled carriers under the registration requirement of the C.A.B. and from trade sources, some information on the economic characteristics of the new air services is available. It is of interest to mention the most noteworthy of these.

1. The first characteristic of significance is that the newer branch of the air transport industry is composed of a large number of firms. As of January 15, 1947, 870 nonscheduled air carriers had registered with the C.A.B. and reported some data on their operations, in most cases covering May and June, 1946. While many of these carriers may have gone out of business since filing their reports, it is nevertheless apparent that the number of air transport firms has been greatly expanded when comparison is made with the thirty scheduled airlines in domestic trunk-line, feeder, and aerial pick-up operations.

2. A second characteristic of interest is that a large variety of services are being offered by nonscheduled carriers. Some offer nonscheduled passenger service along certificated airline routes (although this service has been of declining magnitude); others serve points not connected by such routes; while still others offer general charter services, special executive charter services, and tour services. As of October 28, 1946, 375 carriers reported offering cargo services, in most cases in conjunction with passenger services. The bulk of the traffic, however, was handled by the relatively few carriers concentrating exclusively or primarily on cargo business.³ Some cargo lines carry passengers in second-class service on back-hauls, such as from Los Angeles to New York. According to the reporting carriers' own designation, 232 of the cargo group offered common carrier service; 41 contract service; the remainder failed to designate this characteristic.

3. Another noteworthy feature is that the nonscheduled air transport industry has already attained considerable size as compared with the scheduled industry, particularly in carriage of freight. As of September, 1946, the scheduled carriers had 694 planes, of which all but 15 were of the transport size, fourteen-passenger capacity or larger. The 302 cargo carriers reporting on equipment had approximately 244 transport-size planes and 982 smaller planes. Thus, even an incomplete inventory shows that the nonscheduled cargo group had about one-third as many transport-size planes as the scheduled lines. In addition, 181 nonscheduled carriers engaged primarily in passenger operations reported 51 transport-size and 658 smaller planes. During May and June, 1946, the nonscheduled passenger carriers reporting traffic data carried 1.6 per cent as many passengers and 1.8 per cent as many passenger-miles as

³ For more comprehensive data on nonscheduled air passenger services and carriers, see the *Industry Report on Domestic Transportation* for August-September, 1946, issued by the Transportation Division, Office of Domestic Commerce, Department of Commerce, Washington, D.C., pp. 51-64; for data on nonscheduled air cargo services and carriers, see the October-November, 1946, issue of this series on *Development of Air Cargo Services*, pp. 45-60 and Appendix A.

the scheduled airlines. In sharp contrast, 55 of the nonscheduled cargo carriers—those reporting pound-mile data—carried 66.1 per cent of the total cargo and 40.3 per cent of the cargo and express ton-miles carried by both scheduled and nonscheduled lines during that period (3,638,151 ton-miles of freight compared with 1,866,522 ton-miles of cargo and 5,384,211 ton-miles of express and cargo by the scheduled lines).

4. Of considerable significance also is the small-scale characteristic of the nonscheduled air transport industry. Thus, the 224 passenger carriers which reported on equipment had an average of 3.9 planes per carrier during May and June, 1946, and 61 per cent reported 3 planes or less—even the 39 firms operating transport-size planes averaged only 4.7 planes. Likewise, the 302 cargo carriers reporting on equipment averaged only 4.1 planes per carrier—six carriers using transport-size planes exclusively in cargo service averaged 10.7 planes. Those passenger carriers reporting on employment (210) averaged 12.2 employees per carrier; the cargo carriers (256), 16.3 employees per carrier.

It is therefore apparent that the appendage to be absorbed into the already established air transport pattern is of considerable magnitude. What happens will directly affect many entrepreneurs, employees, and investors. While the public does not in large measure depend upon nonscheduled carriers for trunk-line passenger services, some types of services, such as executive and resort services, are offered for the most part by nonscheduled carriers. The passing of wartime shortages does not alter the dependence of the public upon nonscheduled lines for air service to many points not served by scheduled carriers. As of November 1, 1946, the latter were certificated to serve directly only 499 urban points of a total of 3,464, containing 62.5 per cent of the total United States urban population. In time, the feeder lines may ameliorate this situation except for unusual vacation and group movements on an irregular basis.

On the other hand, shippers' dependence upon nonscheduled carriers for air freight services is a vastly different and more serious matter. Most observers agree that the bulk of the domestic air freight has for some months been carried by nonscheduled carriers, possibly even when air express is included. It cannot be judged at this time to what extent this division of traffic may be attributed to the greater aggressiveness of the nonscheduled operators and to what extent it reflected inherent advantages of their more flexible pattern of operations or lower costs from simplified and small-scale organizations. It is important to bear in mind, however, that until now, and unless restrictive regulation curtails the flexibility of the new operations, the nonscheduled services may be rendered to and from the noncertificated points as demand develops. Of course, the scheduled lines might apply for additional cargo routes or establish contract service to cover the noncertificated points. It is interesting to note that only one of the scheduled lines, P.C.A., has applied for a cargo certificate in the *Air Freight* case.⁴

Although the tremendous growth of nonscheduled service on the basis of private investment and the increased activity by the scheduled lines which it

⁴ C.A.B. Docket No. 810, *et al.*

has stimulated have produced much experimentation with air cargo, lower rates, and rapid expansion of that traffic, some concern has been expressed over the future adequacy of the air transport services. This has arisen not only from the reported unprofitability of many nonscheduled lines, a not surprising result in the pioneering period, but also from concern lest the possible long-run effects of the great proliferation of firms and planes may weaken the scheduled airline system in such manner that its maintenance would cost the government greater sums. Only a few of the elements of this large problem can be treated here.

An obsession over the possibility of injury to the established air transport pattern should not be permitted to blind us to the promise that the new airline situation holds for workable competition and the advantage of fostering the elements conducive to that market condition. An urgent need exists for the maximum experimentation in provision of air cargo services—already the existence of numerous operators free and willing to try new methods, new route concepts, and new services and to apply the energy of a large number of organizations not dominated by preponderant interests elsewhere has contributed an unusually rapid development of air freight. Although a large number of firms, without consideration of dominant firms, the extent of geographical or other comparability of service, the possible economies of scale and other elements, cannot be considered conclusive, there can be little question that the greatly increased number of carriers significantly improves the possibilities of workable competition in the air freight field.

Because there are so many unknowns—the extent of the cargo market, the patterns of existing routes and services, the number of carriers serving each route and developing each market, the requirements of the service from the shipper's point of view, and the economies of specialized cargo operations versus combination services—the C.A.B. will have to be clairvoyant, indeed, to avoid exerting arbitrary and restrictive influence upon the development of the air cargo industry. Assuming the desirability of promoting workable competition, certain essentials seem evident. First, a too restrictive influence should not be exerted upon the number of carriers trying the business. The scheduled air pattern of one or a limited number of firms on each route was partly the result of the requirements of passenger and mail services and a technology favoring the use of large planes, but it also reflected a deliberate government policy to minimize the subsidy element in promoting air commerce. In view of the absence of direct operating subsidies to nonscheduled carriers and the greater need for flexible routes and operations in the case of air freight, the opportunity which exists to foster the competition of many firms in the cargo services can be assured if the door to free enterprise is not blocked or closed too tightly. Though there may be a legal presumption that restrictive certificate control must be applied to many of the nonscheduled carriers, that hardly justifies artificial discouragement by application of rigid standards of public convenience and necessity. Even the dropping out of many of the original nonscheduled applicants in the *Air Freight* case may be significant largely as indicating the barrier of the cost and risks involved in getting a certificate. Considering the unknowns in the situation and the

lack of evidence of any substantial burden upon the scheduled system,⁵ the Board might well wish that competition might have been permitted to do the weeding out of the inefficient and unnecessary carriers.

A second essential is that care be exercised to prevent established airlines with large pools of revenues from other services from using their revenues to take losses on their cargo enterprises for a sufficient period to threaten the existence of the struggling new firms solely or largely dependent upon cargo revenues. It may prove wise to encourage development of specialized cargo carriers, except to the extent that hauling express and other high-rated cargo on combination flights is economical because of the availability of some cargo space otherwise unutilized and to the extent that bulk-cargo operations in planeload lots can be segregated to insure their standing on their own feet. To overcome the difficulty of freight solicitation by small carriers and to minimize that overhead cost factor, it also seems desirable to encourage the air freight forwarder. Here again there are difficulties to working out a pattern before the hard forces of the market have had an opportunity, as in the case of the trucking industry, to demonstrate the economical organization. Also many of the nonscheduled carriers interested in cargo have found the market so small that they have had to participate in passenger carrying, too. Drawing definite lines channelizing operations appears unnecessarily arbitrary in such an early period of development.

A third essential is that restrictive controls and regulatory burdens be kept to an absolute minimum. In the trucking industry where economic regulation came after a mature state of development had been reached, restrictive provisions in operating authorities discouraged many carriers from continuing in the business.⁶ Thus, the case for economy would have to be very persuasive before restrictions were placed upon the specific commodities that an air cargo line may carry, the points which it may serve except in broad origination and termination groupings, the classes of shippers or consignees that it may serve, or the direction of its authorized movement. And the cost in money and time of obtaining new or expanded operating authority should not be allowed to become so great as to discourage efforts to expand services or institute new ones. Otherwise the need for services may have to become rather urgent before taking the risks would be justified. Many of the smaller opportunities to extend air service may be lost in a situation where regulatory restrictions discourage exploitation of all but the largest markets between which traffic is dense.

In the time allotted a thorough treatment of the factors that should be considered by those who have the power and duty to settle the issues between scheduled and nonscheduled carriers is not possible. The discussion has been carried to the point of indicating that no clear solution exists and that perhaps the best course is to make haste slowly in interfering with the forces that are operating of their own accord.

⁵ See the decision of the C.A.B. in *Investigation of Nonscheduled Air Services*, Docket No. 1501, May 17, 1946, and transcript of oral argument on "Division of the Economic Regulation 292.1," Docket No. 2742, January 6 and 7, 1947.

⁶ See *Federal Regulatory Restrictions upon Motor and Water Carriers*, Senate Doc. No. 78, 79th Cong., 1st sess., 1945.

HOUSING PROBLEMS

OBSERVATIONS ON THE PROVISION AND USE OF DATA FROM THE 1940 HOUSING CENSUS

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Active work on plans for the housing census of 1940 was begun in 1938 by a subcommittee of the Central Housing Committee under the chairmanship of Dr. Ernest M. Fisher. I know that neither Dr. Fisher nor Mr. Warren Vinton nor any of the other members of this subcommittee appreciated the many and varied uses that would be made of the results of this census. Some of these uses were obvious, but many of them were not anticipated. And, of course, in 1938 and 1939 we did not know that the United States was to enter a world war and we were unable to forecast the usefulness of the statistics in the national and local planning of activity for the war.

Use of Housing Census Data. It is difficult for us to find out about many of the uses that have been made of the census data. We are seldom informed when a person is able to find exactly the figures he is seeking in the published census reports. On the other hand, we often hear from people who want cross-tabulations which we were unable to complete. Because of this situation we are inclined to get the impression that no one would have noticed the omission if we had not prepared the materials that were published; and that everyone would have been happier if we had tabulated a quite different set of statistics.

The uses that have been made of the statistics from the census of housing include the following: (1) The statistics have been used as a basis for estimates of the total housing requirements in the United States and in various local areas. (2) The statistics have been used as a basis for estimates of the demand for public housing in various local areas. (3) The statistics on home facilities and equipment have been used to determine the extent and location of the market for specific types of plumbing, heating, refrigeration, cooking, and other types of equipment. The statistics relating to monthly rent have been used as a measure of general purchasing power within various local areas. (4) The housing statistics by city blocks for the larger cities have been used in the analysis of the characteristics of neighborhoods within the cities. (5) The statistics for smaller areas have been used in designing the area samples which have served as a basis for many surveys of local areas. (6) Special tabulations of the characteristics of subscribers to a home magazine have indicated the relative quality of this selected group

of households. (7) During the war and the reconversion period the statistics from the housing census have served as a bench mark for current surveys of housing requirements. They were also used in formulating the civilian defense program of many cities.

I should like to expand somewhat on the statement regarding some of these uses of the housing statistics.

Estimates of Total Housing Requirement. Many different estimates of the total housing requirement in the United States have been prepared in the past few years. Practically all of these estimates are based, in part, on the statistics from the census of housing. The estimates prepared and published in 1944 by the National Housing Agency are among the better known of these various approximations and are typical of the approach used in many of them. The National Housing Agency estimates are based on two major components of the need for new nonfarm dwelling units between 1946 and 1955. The first component is the number of dwelling units needed to supply housing for the increase in families that it is estimated will occur in the period.

The second component of need arises from substandard dwelling units which should be replaced. In the National Housing Agency study it is assumed that in metropolitan districts the number of substandard units in 1940 was approximately equal to the number of units which were in need of major repairs or lacked a private bath. Outside metropolitan districts it was assumed that the number of substandard units was equal to the number of units which were in need of major repairs. It was then assumed that one-half of these 7,000,000 substandard units of 1940 should be replaced and that an additional group of 2,600,000 dwelling units should be built to replace the units that become substandard between 1940 and 1955.

I should like to emphasize the fact that this estimate of housing need and of the number of substandard units is not the product of the Bureau of the Census. It is our belief that the Bureau of the Census can be most useful if it serves as an impartial fact-finding agency without attempting to analyze the facts as we determine them. The census reports show the statistics on the number of dwelling units that lack a private bath and the number of units that need major repairs. The census does not attempt to convert these figures into estimates of the number of substandard units nor of the demand for housing.

Estimates of Demand for Public Housing. The Federal Public Housing Authority and local housing authorities have made extensive use of housing census data in determining the extent and nature of the demand for public housing in various local areas. In part, they have used the statistics on state of repair and plumbing equipment to measure the extent of the need for housing and the characteristics of the less satis-

factory units, in order to determine the number and size of dwelling units that are required and the rent-paying ability of families who would be eligible for public housing.

Uses of Statistics on Home Facilities and Equipment. In the 1940 census of housing considerable information was obtained concerning the facilities and equipment of each dwelling unit. This information related to whether the unit had electric lighting; whether it contained a radio; whether it had mechanical refrigeration or an ice refrigerator; the type of heating equipment which served the unit; and the type of heating fuel and cooking fuel used in the dwelling unit. We realized that all of these data would be of interest to the manufacturers and distributors of various types of home equipment. In planning our publication program, however, we found it necessary to omit certain of these statistics for the smaller areas. We have since found a considerable demand exists for these unpublished data. In particular, there has been a demand for type of refrigeration and type of cooking fuel and heating fuel by census tracts and other small areas.

In addition to the use of these housing data for local areas as a measure of the demand for specific products, it has been found that these data also serve as indicators of the probable demand for related products. In particular, the figures on contract or estimated monthly rent for blocks, census tracts, and minor civil divisions are used as a measure of the general purchasing power of the various areas; in the absence of any other composite measure of economic status in the population census.

Uses of Block Statistics. The tabulation and preparation of housing statistics on a block basis for the larger cities represented one of the innovations of the 1940 census of housing. These statistics have made possible the detailed analysis of the housing characteristics of neighborhoods within the cities. They have been used by private builders and mortgage lenders in determining the characteristics of existing housing in a neighborhood and the probable soundness of mortgage loans in the area. They have been used by local housing authorities in formulating their public housing program, and have helped in defining the areas of the city which contain the worst housing.

Housing Census Data as a Base for Sample Surveys. One of the unanticipated uses of the housing census data was in connection with the sample surveys of local areas that were conducted during the war period. It has been determined that improved accuracy can be obtained in local sample surveys when the surveys are conducted on an area sample basis. With this approach the group of persons or dwelling units included in the sample represents all or a portion of those located in a designated group of city blocks or other small areas within the

community. Greater precision can be obtained in the results of such surveys if information is available concerning the number of dwelling units in each block and the characteristics of the blocks. With such information the sampler is able to select a group of blocks which he knows to be representative of the community as a whole. The housing census of 1940 yields the number of dwelling units in each block in the larger cities and in each enumeration district in the remainder of the country. It also yields the extent of home ownership and the average rent of the dwelling units in these various areas. These data have been used in the design of surveys of the population in selected congested areas, in surveys of occupancy and vacancy, of rent changes, of population and labor force characteristics, and of the housing of veterans. They have also been used in a similar manner in a considerable number of surveys which have been conducted by local governmental units and private research agencies.

Characteristics of Subscribers to a Magazine. One of the most novel and unanticipated uses of statistics of the census of population and housing is a recent study of the characteristics of the subscribers to one of the leading home magazines. The publisher of the magazine supplied us with a representative sample of their 1940 subscribers. We transcribed from the schedules of the 1940 census certain selected population and housing characteristics of each of these subscribers and also of a nonsubscribing neighbor of each subscriber. Tabulations of these statistics indicated the age, occupation, family size, number of children, and wage income of each subscriber and of the neighbor, as well as the characteristics of the homes they occupied, including owner-occupancy, type of structure, number of rooms, monthly rent, and the facilities and equipment of the homes. In general, the study indicated that the subscribers of this periodical had a higher income status than their neighbors, who in turn had a higher status than the country as a whole. This study was financed by the publisher of the magazine. There was no violation of the confidential nature of census records, since we supplied the publisher with only the summary statistics and no records which could be identified as those of any individual.

Wartime Uses of Census Data. Pearl Harbor and the entry of the United States into the war brought a stop to "business as usual." The normal uses of housing census data practically ceased. Nevertheless, the statistics from the census of housing continued to be useful, although many of the uses were not of a type that was anticipated when the census was planned. The federal government imposed severe restrictions on the construction of new homes. In the early days of the war, the 1940 vacancy ratios were used as a rough measure of

the unused supply of housing in the various areas which were clamoring for more homes for their war workers. The Office of Price Administration imposed rent control in those areas which showed significant increases in rental rates. In order to determine these areas, surveys of rental rates and vacancy were made and the results of the surveys were compared with rental and vacancy data for 1940 to determine whether significant changes had occurred. After an area had been placed under rent control, the 1940 data were used as a bench mark to determine whether increases in rental rates should be granted.

The wartime civilian defense program of urban centers was based on the integration of the defense plans of city blocks and neighborhoods with the plans for the community as a whole. The 1940 housing census data were used to obtain the number of households in each block and in defining homogeneous neighborhoods in building up the defense program. The efficiency of this defense organization was improved through the use of these statistics, even though there were no air raids and no foreign foes invaded our cities.

Uses of the Data During the Reconversion Period. In the current reconversion period results of the housing census are being used in several different ways. While substantial changes have occurred in certain aspects of the housing situation, the census still shows the basic relationship between various housing characteristics and the rental and tenure of the homes and the family income of the occupants of the homes during the comparatively normal period of 1940. The housing census also supplies a bench mark for the more recent sample surveys of housing. In November, 1945, the Bureau of the Census conducted such a sample survey which supplied statistics for the United States as a whole. The most significant result of this survey was information about the changes that had taken place in the period 1940 to 1945.

The Bureau of the Census and the Bureau of Labor Statistics have conducted surveys of the present living arrangements and future housing plans of veterans. These surveys cover more than a hundred local areas and area sampling has been used in all of them. The area samples are based on the 1940 housing census data by blocks for many of those areas for which the data are available.

The Enumeration and Definition of Various Housing Characteristics. The experience gained in enumerating and analyzing the 1940 census of housing will be most helpful when we formulate plans for the next housing census. The results of some aspects of the census were better than we had anticipated but some were not so good. We hope to retain those features which were highly satisfactory, and in the absence of more satisfactory alternatives, it may prove desirable to continue

some of the less satisfactory of the 1940 procedures in spite of their shortcomings. Our experience with the following aspects of the census are worthy of mention: (1) In the enumeration of state of repair it was realized that difficulty would be encountered in establishing definitions which would yield the required information and which would be uniformly applied by all the enumerators. (2) We realize that information concerning mortgage characteristics might not be highly accurate since most of the information would be obtained from housewives. (3) The year in which each structure was built could not be obtained with accuracy from the occupants of many units, especially from tenants of the older houses. (4) The comparatively simple classifications of vacant units proved to be insufficient for any comprehensive analysis of housing supply. (5) Some difficulty was encountered in establishing and applying a definition of a dwelling unit. (6) In like manner, some difficulty was encountered with the census concepts of families and households.

The Enumeration of State of Repair. When plans for the 1940 census were being formulated, it was realized that many groups would wish to use the results of the census to determine the number and location of substandard dwelling units throughout the country. The determination of when a dwelling unit is substandard represents a difficult problem. The census enumerators can determine with accuracy whether there is running water in a dwelling unit; whether there is a flush toilet and a bathtub or shower in the structure for the use of occupants of the unit; how many rooms there are in the unit; whether the unit has central heating, a mechanical or ice refrigerator; and what type of fuel is used for heating and cooking. If the users of housing statistics could agree on a concept of standard and substandard units in terms of these items of facilities and equipment, the Census Bureau could then tabulate the various items and combinations of them in the required form.

Unfortunately, the various users are unable to concur on which items are required for a standard unit. Furthermore, there is a considerable number of units which are substandard because of the degree of deterioration or the state of repair of the unit, even though the unit is adequate in terms of the items specified above. It was decided that the census enumerator should determine whether or not each dwelling unit was in need of major repairs, in addition to determining the facilities and equipment of the house. The enumerator was instructed to report a unit to be in need of major repair when parts of the structure, such as floors, roof, plaster, walls, or foundations, required major repair or replacement. A repair was major when its continued neglect would seriously impair the soundness of the structure

and create a hazard to its safety as a place of residence. The enumerator was told to base the report on state of repair on his own observation without making any effort to inspect any rooms of the unit beyond those which he saw in the course of the enumeration and without asking the respondent for his opinion on the state of repair. More than 130,000 enumerators were employed in the 1940 census and, in spite of our attempts to be objective in the definition, it is obvious that not all of them reported state of repair in the same manner.

A general review of the results, however, indicates that the figures are surprisingly consistent and that state of repair was properly reported for most of the units. The statistics on this item do serve a useful purpose, if they are used with a little caution. Unless we succeed in finding an acceptable substitute, it may prove desirable to retain state of repair as one of the items on the enumeration schedule for the 1950 census.

The Enumeration of Mortgage Characteristics. The 1940 housing schedule contained a considerable number of questions relating to the amount and characteristics of the outstanding mortgage loans on owner-occupied, nonfarm properties. These characteristics include the amount outstanding on first mortgage and on junior liens, the interest rate, type of holder, and monthly payment on the first mortgage; and whether such payments include payments on principal and on real estate taxes. Most of the information in the decennial census is obtained from housewives, and many housewives are not thoroughly familiar with the characteristics of the mortgage loans on their homes. The results of these mortgage inquiries checked surprisingly well, however, with various independent estimates.

As indicated above, we have learned a great deal since 1940 about the design and enumeration of sample surveys. We could probably obtain more accurate mortgage information through a sample approach. With a small coverage we could insist that the enumerator call back and secure the information from the husband if the housewife was unable to supply accurate information. It is probable, therefore, that this mortgage information will not appear on the over-all schedule for the next decennial census.

The Enumeration of Year Built. The year in which the structure was built is another housing item on which the enumerated information is not highly accurate. The reported information shows concentration on 1930, 1920, and other years ending in "0" or "5," indicating that many of the occupants of units, especially tenants, did not know the exact year when the structure was built and reported their best approximation. These approximations were good enough for most analytical purposes, but would not be sufficiently accurate for an analysis

of the year-to-year fluctuation in building activity. There is a possibility that the item will be retained on the census schedule for 1950 as a rough indication of the age of the property in spite of its known limitations.

Expansion of Statistics Regarding Vacancy. The 1940 census of housing reported as vacant a total of nearly 2,500,000 dwelling units, or 6.6 per cent of all units. This group of vacant units included 600,000 units which were not for sale or rent, and 1,900,000 which were for sale or rent, including units which had been sold or rented but were not yet occupied by their new occupants.

During the war vacancy surveys were conducted on a sample basis at the request of the National Housing Agency by the Bureau of the Census and the Bureau of Labor Statistics. Using the concepts of 1940, the earliest of these vacancy surveys seemed to indicate that many of the communities had a moderately satisfactory supply of vacant units at a time when the families of the community found it almost impossible to secure units which were satisfactory for their use and which were vacant and available to buy or rent. It became necessary, therefore, to obtain further information concerning the units that were classified as vacant. The enumerators were instructed to determine whether the vacant units were "uninhabitable" or in need of major repairs. If the unit was in need of major repairs, it was determined whether units in similar condition in the same neighborhood were being occupied. On the basis of this information, the vacant units were classified into two major groups: the habitable vacant units and those which were uninhabitable, including those so reported by the enumerator and also including units in need of major repairs when units in similar condition in the neighborhood were not being occupied. The habitable vacant units were further classified as: (1) offered for rent; (2) offered for sale only; (3) rented but not yet occupied; (4) sold but not yet occupied; and (5) other vacant units being held off the market for various reasons.

The results of the sample survey conducted by the Bureau of the Census in November, 1945, indicate the importance of these various groups of vacant units. This survey reports a total of 3,000,000 unoccupied dwelling units in the United States as a whole. Of this group, 700,000 were uninhabitable units. Of the 2,300,000 habitable vacant units, 200,000 were sold or rented but not yet occupied and 1,300,000 were held off the sale or rental market for various reasons, leaving only 800,000 vacant habitable units that were for sale or rent. Information was also obtained in this survey regarding the facilities of the vacant units. The survey also shows that less than one-third of the vacant habitable units had all of the following facilities: electric light, running

water, private flush toilet, and private bath. In urban areas two-thirds of the vacant units had these facilities. Thus we have learned that it probably will prove desirable to obtain more information concerning the availability and condition of the units that are reported to be vacant in the next housing census.

Definition of a Dwelling Unit. In 1940 the Census Bureau defined a household as a group of persons living together with common house-keeping arrangements and a dwelling unit as the space occupied by a household. The enumerator sometimes found it difficult to decide when a group of persons constituted a separate household, and thus were the occupants of a separate dwelling unit, and when they should be reported as members of a larger household and of a larger dwelling unit. To avoid this difficulty, we have established more specific and more arbitrary definitions of the type of space that is to be reported as a separate dwelling unit. A group of rooms is now defined as a separate dwelling unit if it is occupied as separate living quarters and has separate installed cooking facilities or a separate entrance. A single room without cooking facilities is not a separate dwelling unit, unless it has a separate entrance and also has a private bath or is rented unfurnished.

The Concept of Family, Household, etc. In the next decennial census of population and housing greater emphasis should be placed on the relationship between the various concepts of household, family, subfamily, and married couple. The statistics for 1940 on these various items are reasonably satisfactory but the user of the statistics is often confused by the concepts. A household in 1940 included all of the persons living together and occupying a separate dwelling unit. A family comprised the head of a household and all members of the household who were related to the head. Thus, the number of families was exactly equal to the number of households. In addition to members of the family of the head, a household might include roomers, lodgers, and hired hands not related to the head but who were living in the household. A married couple of which the husband was not the head of the household was reported as a subfamily in 1940. Such a couple could be related to the head of the household and therefore be included as members of his family, or the couple could be living in the household as lodgers or roomers. In neither case would this couple be reported as a separate family.

The recent Census Bureau estimates of trends in number of families in the United States illustrates the danger of confusion in the family statistics. This report presents the estimated number of families for each year since 1940 and projects the estimates into the future to

1960.¹ For the period 1940-45 it was recognized that the number of married couples was increasing but that many of these couples were not establishing separate homes and thus were not becoming separate families, at least in part because of the shortage of new homes. The continuing shortage of housing was taken into account in projecting the estimates of number of families into the near future.

Many additional couples and other groups would welcome the opportunity to occupy separate dwelling units and to become separate families if a greater supply of moderately-priced houses became available. Since the estimated increase in number of families is restricted by the supply of housing, there is danger that this estimated increase will be interpreted as an indication of only a moderate potential demand for new homes. We at Census Bureau are now studying this problem of family concepts and hope to have an approach to it in 1950 which will increase the usefulness of the data.

Summary. It is obvious that our approach to the housing questions on the 1950 decennial census will not be exactly the same as in 1940. Changes will occur because the problems in the housing field will not be the same as they were a decade ago. Furthermore, we shall profit from our experience with the 1940 data. Nevertheless, it has been gratifying to find that our 1940 plans did work out very well and that the results of the census were useful even beyond our fondest expectations.

¹ See release, series P-46, No. 4, *Families in the United States: 1940 to 1960* (Washington, D.C.: Bureau of the Census).

OBJECTIVES AND ACCOMPLISHMENTS OF THE VETERANS' EMERGENCY HOUSING PROGRAM

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When anyone, in a moment of weakness, agrees to take on a job like this paper, he sooner or later regrets it and seeks consolation wherever he can find it—on a desert isle, in psychoanalysis, or among the philosophers. I chose one of my favorite social philosophers, Mr. Dooley.

One of Mr. Dooley's most amusing discourses is on history. His friend Hogan, who fancied himself as an amateur historian, came a cropper with a professional in the trade. Hogan was an admirer of Julius Caesar but the historian was not. As Mr. Dooley tells it:

Anyhow, all I know about Rome is what Hogan has told me an' he was always boostin' up Joolyus Cayzar to me. I got an idee fr'm Hogan's talk that Joolyus Cayzar was a fine man; a little gay, mind ye, with th' ladies, but a fine man. . . . But this profissor iv histry says Hogan is all wrong. "Joolyus Cayzar was be no means th' tulip he is pitched be historyans nearer his time thin mesilf," says he. "The further ye get away fr'm anny peeryod th' betther ye can write about it. Ye're not subjack to interruptions be people that were there. I wud not undertake to write a histry iv Peorya in nineteen hundhred an' eight, but if ye want th' latest news from Rome two thousand years ago, hand me that fountain pen. . . ."

I am sure the application of these remarks to my present predicament is quite obvious. And I am sure that you who listen to this paper can recognize the difference between being serious and being solemn.

I am glad that the Program Committee has included the veterans' housing program in this meeting of the Association. Although nothing definitive can be said about it now, as Keynes once pointed out, if economists wish to have any influence on the course of affairs, they must come to grips with current problems and do more than point out rather sententiously that after the storm is over the sea will be calm again. And from experience I know that pontification of that sort not only is useless but to the boys in the boiler room is most annoying—to put it mildly.

Just one more preliminary: anyone who talks before a scientific organization on a controversial, current topic certainly owes his listeners a frank disclosure of his connections with it so that they may form their own opinions of his possible prejudices and of the perspective, or lack of it, that may go with his particular observation post. During most of the war I worked for the National Housing Agency as Assistant Administrator on the program side of the shop. I helped some in framing the untried veterans' program that Mr. Blandford, NHA's first Administrator, was putting forward in the latter months of 1945.

I had no part in developing the Wyatt program. In fact, my resignation, which had been pending for some time, became effective almost immediately after Mr. Wyatt took over. I was, however, in Washington at his request until late June of 1946 and have tried since then to keep up with the development of the program and with results under it.

Despite the campaign carried on by at least one trade magazine and joined in occasionally by others, there is and has been a serious, widespread housing shortage. Those in the business who deny it, who would like to be left alone with the all but defenseless housing consumer might reflect on the remark of one man who said that he had been told there was no housing shortage—it was all just a rumor started by a lot of people who could not find a place to live.

What can be said today that will make some contribution to the program of this Association and to an understanding of today's housing issues? It is a very tough question to answer. For better or for worse, however, I have decided to try to do three things: (1) To outline briefly the main features (and only the main features) of the Blandford and Wyatt programs. (2) To sketch only the highlight results under Mr. Wyatt's program during its ten months of operation. (3) To offer some comments on or, to use a word I do not like, some interpretations of the course of housing events during these programs. I hope these comments may throw some light on a complicated and often obscure scene and may stimulate more productive thought on future housing policy in this country.

The Blandford program was never dramatically promulgated amid the clack of editorial typewriters and the popping of flashlight bulbs. It was put forward as it evolved. It appeared in various speeches by Mr. Blandford, in his testimony to Congressional committees, in conferences with leaders in the housebuilding and material supply business, housing officials, consumer, labor, and public interest groups. Unfortunately this program was never seen as a whole by a large number of people. It proposed:

1. To relax, during the latter stages of the war, the limitation of housing construction to the needs of in-migrant war workers. This was to take the edge off the most acute accumulated needs and to start an upswing of house building and materials production. Although delayed by some of the government agencies that later complained most bitterly about low housing production, this part of the program showed results. Housing starts increased in 1945 by about a third over 1944. This result looked mildly encouraging when the official estimates of demobilization were $2\frac{1}{4}$ million men in the first year or so after V-E Day. It looked small, maybe even insignificant, when

over 3 million men were demobilized in October and November, 1945, with more than 10 million scheduled for release in the fifteen months beginning October 1, 1945.

2. To retain L-41, WPB's basic construction limitation order, until material production showed signs of approaching volumes required by the unprecedented housing need. This was not done. Even before V-J Day a Construction Co-ordinator was appointed. Shortly after the surrender of the Japs, L-41 was loosened in various respects. In the latter part of September on the Co-ordinator's recommendation its final repeal was announced for October 15. Later, to try to recover some of the ground lost by this move, priority assistance to house builders was reinstituted. CPA's order PR-33 of January 15, 1946, gave rather weak priority to housing construction on about ten of the most critically short materials. To be eligible for this aid, houses had to be sold for not more than \$10,000 or rented at \$80 per month or less. Veterans were to have preference on occupancy. Builders were to be urged to build as far down the price-rental scales as they could.

3. To make known the best estimates possible for immediate future housing need *but* (and this was held to be important) to avoid at all costs overemphasis on these needs that might create panic, lead to desperation buying, and push up further the prices of houses and their components. Incidentally, although nation-wide goals were not a part of the Blandford method, he did estimate that about 475,000 permanent units would be completed in the fifteen months for October 1, 1945, to the end of 1946. Late in 1945 some of his staff were suggesting that this figure be increased by 50,000 to 75,000.

4. To stress, through mayors' committees and every other feasible means, the best possible use of the existing housing supply and the duty of civilians to give the veteran a more than even break on the sizable volume of housing that comes on the market every year through voluntary doubling up, death, and other forms of family break-ups. As a part of this effort, veterans were to be given priority on all vacancies in the publicly-owned war-housing supply. The mayors' committees were also to do what could be done locally to stimulate materials production, to encourage building code reform, and proper city planning.

5. To re-use the temporary housing built by public agencies during the war by cutting up into panels and moving these structures from places where they were not badly needed. Although the first modest request to Congress for this obvious action was literally derided by a subcommittee of the House of Representatives Appropriations Committee and was turned down flat, by the end of the year funds were

obtained from Congress for 100,000 re-use units—the number that then seemed likely to be available. The plan was to start with these and to ask for more funds if and when more units might become available later on.

6. To help WPB, later the Civilian Production Administration, in using its powers of inventory control, allocation or other spot-attacks on specific bottlenecks in materials manufacture and distribution.

7. To ask Congress to put the brakes on price inflation in existing housing by making the first resale price of a house after a certain date the legal ceiling price until the end of the housing emergency. Federal and state agencies with powers, direct or indirect, over mortgage lenders were to be asked to use their influence in avoiding unwise lending and overoptimistic appraisals.

8. To urge the prompt passage of the Wagner-Ellender-Taft housing bill that would increase government aid to rental housing, particularly in the low income and middle-market brackets, and also lay the groundwork for an orderly, long-term attack on all ranges of housing need and on all kinds of residential blight in urban areas. Part of the strategy was to avoid, if possible, confusing or diverting Congress from prompt and thorough consideration of this measure by requests for other less important legislation.

9. To encourage apprentice training for the building trades through the government units granted these powers in the Department of Labor and the Veterans Administration.

10. To encourage conversions that would produce additional accommodations by increasing the allowable loans under Title I of FHA's program from \$2,500 to \$5,000 and the length of such loans from about three years to seven years.

11. When all real responsibility for the program was taken from Mr. Blandford's hands, he was about to ask for an extension of Title VI of the National Housing Act that FHA had proved an effective stimulant to housing construction during the war.

The Wyatt program was formally announced on February 7, 1946. It was accompanied by a statement of the President's unqualified approval. In the next several days nearly everyone else who sets himself up to pass upon public issues approved it. Editorial writers, radio commentators, magazine writers, Congressional leaders, state and local officials, labor leaders, officers of veterans' organizations, educators, even trade association officers seemed to vie with one another in praising it. Certainly in the weeks after February 7 this program received many times the public attention and comment ever given before to a housing proposal or program in this country, and it was over-

whelmingly favorable. To be sure, much of the comment clearly came from people who knew little about housing and who assumed, therefore, that the Wyatt program was all new and different. Some of it from trade associations and other lobbying groups was rather cagily phrased—with the emergency exits for rapid withdrawal quite apparent to those who could read between the lines. But there it was—a chorus of approval and support.

This fact is no minor incident in any account or evaluation of the Wyatt program. It bears on Mr. Wyatt's basic philosophy and method. On many points he naturally and properly took over corresponding items from the Blandford program—sometimes with incidental and sometimes with substantial modifications. The need estimates, primary reliance on conventional private construction, re-use of temporary houses, priorities for house builders, Title VI of FHA's act, mayors' committees, control of prices of existing properties, the Wagner-Ellender-Taft bill, are examples. He added others—notably guaranteed markets and premium payments, restriction of nonresidential building, RFC loans for materials production and facilities, price control of building sites, and a large assignment to prefabricators.

The fundamental difference, however, lay not in individual items but in the spirit and the method. Unlike Blandford, Wyatt clearly was trying to organize a crusade. He set big goals; he said time and again that they could be reached. He tried to mobilize public opinion behind the whole program—a moral equivalent for war, if you will. He used every means of publicity and public education he could put his hands on from the traditional speech before the National Press Club to movie shorts. He early brought the battle with the real estate and building lobby out into the open. He clearly counted on arousing public opinion to a point where it would stir manufacturers and builders to maximum efforts and bowl over opposition that would not accept what seemed like reasonable compromise.

Because of this widespread publicity it probably is not necessary to repeat here all fifteen of the points in the Wyatt program. The chief ones were:

1. For the two years 1946 and 1947 Wyatt set a goal or target of 2,700,000 housing starts—not completions. For 1946 the figure was 1,200,000 units broken down into 700,000 conventional houses—including 50,000 conversions, 250,000 permanent prefabricated houses, and 250,000 temporary units—200,000 re-use, 50,000 trailers. For 1947 the goal was 1,500,000 starts—900,000 conventional units (the proportion of private and public not specified), and 600,000 prefabricated houses.

In the early summer of 1946 the figures for that year were revised

but the total remained the same. The new break down was 838,000 conventional houses, including 100,000 conversions, 100,000 permanent prefabricated houses, and 262,000 temporary units, including 50,000 trailers. Even if these goals were reached, according to the estimates accepted by Mr. Wyatt almost 500,000 more families would be living doubled-up at the end of 1947 than in October, 1945.

2. Materials production was to be greatly expanded. When necessary, various stimulants were to be applied: premium payments for increased production, guaranteed markets, priorities and allocations of equipment and materials, use of war plants, rapid tax amortization of new plants, wage-price adjustments and price increases where not inflationary.

3. The labor force for house building was to be tripled by midyear of 1947. This meant recruiting and training 1,500,000 workers for on-site and off-site work.

4. All deferrable and nonessential construction was to be postponed during 1946.

5. The federal government was to co-operate and assist in developing home sites, where necessary.

6. "The largest part" of materials was to be channeled into housing to sell at less than \$6,000 or rent for not more than \$50 per month.

7. More effective price controls were to be applied to building materials. Rent control was to be continued. Price ceilings were to be placed on new and existing houses and on building lots.

8. Substantial aids were to be offered prefabricators including technical help, absorbing some of the development costs, and guaranteed markets "assuring full capacity operation."

9. Government loans were to be made when necessary to materials producers and prefabricators.

What were the results of the Wyatt program? Before trying to answer that question a few facts should be recalled. An article in *Fortune* for January, 1947, starts by saying that the most powerful man in the country in 1946 was not John L. Lewis but Wilson Wyatt. On paper that may or may not have been true. He certainly had more power than any other housing official in this country ever was granted. It is a fact, however, that some parts of the Wyatt program never were approved by Congress; for example, price control of existing properties and building lots and the Wagner-Ellender-Taft bill. Other parts, like postponement of nonresidential construction, were started too late and were applied with less than enthusiasm by other agencies of the government. Still others did not get far enough in ten months to show whether they were really needed or would be effective. Only five guaranteed market contracts were made—all with prefabricators, none

with materials manufacturers. The first contract with a prefabricator was entered into in October, 1946. No systematic aid to site preparation was put into operation. Only three RFC loans for materials production were made—total amount \$299,000. In October RFC also made commitments to lend \$2,500,000 to prefabricators. I understand that NHA has recommended a number of other loans to RFC but no announcement of commitments by RFC has been made. With the Lustron Corporation deal out, the other loan commitments would total only a few million dollars more—a very small amount in proportion to the large goals set for prefabrication. We should not forget that Mr. Wyatt's program was for two years and that it lasted ten months—with the handwriting on the wall for the last several weeks of that period.

Within the limits of this paper only one test of the effectiveness of the program seems feasible: how much of the veterans' housing need was met while it was in operation? In other words, how much housing was produced for veterans and at what prices? Although this is a crude test, it is not unfair to such a program. In fact, it might credit the program with some results to which it made little or no contribution but at least did not prevent.

On the volume of starts the official record for 1946 was not available as this was written. Using the figures through November and estimating December's, a procedure that will not miss the twelve-month total very far, we have: conventional, permanent housing, 633,000 units (Wyatt's first goal was 650,000; his second 738,000 units); conversions, 65,000 (first goal 50,000; second 100,000); temporary re-use, 191,000 units, including more than 85,000 dormitory units translated into family-equivalent units on the very questionable basis of two dormitory units equal to one family unit (first goal, 200,000; second, 212,000 units); projects of public bodies and educational institutions without federal aid, preliminary throughout and including about 38,000 dormitory units subject to the 2:1 conversion, 26,000 (no goal); trailers, 48,000 (first and second goals 50,000); prefabricated units, 37,000 (first goal 250,000; second 100,000)—a total of 1,000,000 units (with the dormitory joker out about 935,000), goal, 1,200,000.

Now let us look at completions—the units people really live in. Although these figures are subject to a wide margin of error, again for twelve months of 1946 with December data estimated: conventional and prefabricated units, 455,000; conversions, 45,000; temporary re-use (again with the 2:1 family-equivalent ratio on dormitory units), 100,000; projects of public bodies and educational institutions without federal aid (same comments as in table on starts), 8,000; trailers (this

is the figure for factory shipments), 48,000; a total of 656,000. With the dormitory joker out again, the total is 626,000.

The difference between starts and completions (about 310,000 units) deserves further investigation. It could be due to a low rate of starts in the early months of the year and a steady and rapid acceleration to the end of the period. Such a pattern clearly could account for a difference of that size. But that is not what happened. The high point for starts was a double peak—May and August; for conventional house building it was May. That leaves the other possible explanation: too many starts too early in the year for the volume of materials available, consequent delays in many completions due in part to materials being tied up in other unfinished units, fear among builders preparing to start, postponement of some of their starts, loss of momentum. And this explanation is supported by what reliable builders say and by what anyone can see in many cities throughout the country. It is a sad story—particularly sad because materials production was unmistakably the key to construction volume in 1946. That much was clear from the very start. And materials production picked up very well during the year—particularly in light of the fact that little or no increase was made in production facilities or capacity. Naturally production of some materials did better than others, but an index of construction materials production computed by the Department of Commerce shows that in April, 1946, output equaled the average monthly figure for 1941 and continued upward through October with only one small monthly downturn.¹ And 1941 was a big construction year and a good house building year—715,000 starts and 738,000 completions estimated.

If this analysis is correct, it is most unfortunate that last fall and early winter the over-all volume of starts was still being stressed as if it were a positive contribution to the end objectives of the program.

Prices of housing, sales prices and rentals, are quite as significant in meeting the veterans' needs as the amount of housing produced. This was recognized in the first public statement of the Wyatt program. Point 9 of that program outline reads: "Channelling the largest part of materials into homes and rental housing, both farm and urban, selling for not more than \$6,000 or renting for not more than \$50 per month." I believe that the phrase "largest part" was never officially defined but

¹ This index of materials production is not too good a measure of materials needed in residential building. It covers many items used in house building but the weighting of some reflects their use of in other kinds of construction. For example, 30.2% of the total weights are given to cement and asphalt roofing. Any index fairly designed to measure output of housing materials, however, would certainly show about the same kind of upswing. One computed by the Cleveland Trust Company to measure production of materials for housing shows that in August, 1946, output exceeded the average monthly figure for 1941. (The Cleveland Trust Company, *Business Bulletin*, October 15, 1946.)

during the first months of 1946 it was used in ways that implied that it meant substantially more than one-half—maybe two-thirds or three-fourths—of the total.

Such a meaning certainly could be defended in the light of at least two sets of facts: (1) A Bureau of the Census sample study for NHA in June, 1946, showed that the median weekly income of married veterans was \$48—\$2,400 for an optimistic fifty-week year. Distribution around the median was fairly normal. The median for all veterans was \$40 per week or \$2,000 for a full year. Of those who said they would be in the market to rent if they could find something they liked, over 70 per cent thought they could not afford to pay more than \$50 a month. The median rental estimate of these families was \$43. Of prospective home-buyers, 59 per cent of those who would buy if they could get what they wanted said that they could not afford to pay more than \$6,000. The median of these estimates was \$5,500. (2) Under present market conditions, the handing or filtering-down process works even less effectively than normally.

What are the results on this score of sales prices and rentals? It is hard to say from the facts made available so far. Because of the importance of this sector in judging what the program accomplished, I would suggest that the NHA ought to give us much more complete facts before the final record of the past year is written.

We do know that the 62,600 family re-use units completed to November 30 by the Federal Public Housing Authority and managed by local authorities and other public bodies have relatively low rentals—probably nearly all of them between \$30 and \$40 per month. Through November local public agencies without federal assistance had provided 2,200 family units. Most of these rentals apparently would range from \$30 to \$60 with about one-half in the \$50 to \$60 bracket.

For privately-built housing the picture is very blurred. From NHA's official monthly report for September we learn that from January 15 to some unspecified date, presumably August 31, 703,000 new, privately-financed, permanent units had been authorized; i.e., priority paper had been issued for them. Of these, 182,000 (roughly 26 per cent) were to be offered for rent. (I understand, however, that this figure includes units for which both rentals and sales prices were approved. No one knows how many of these will actually be rented.) Approximately one-third of all rental authorizations in this period were for rents less than \$50 per month—the Wyatt program figure for low rents. One-third of all sales authorizations were for prices under \$6,500—not the original Wyatt program dividing line which was \$6,000. In the October report is the statement: "The median sales price for new privately constructed

units authorized to date is around \$7,500; the rental median is about \$60 a month."

These figures certainly give us the general impression that the original price-rental target was missed widely. Prices on housing under this program average much too high in relation to the veterans' ability to pay. For this result several probable reasons are not hard to find: the general neglect of middle market housing in the past, the very well-developed profit motive of most house builders, the whetting of their appetites by constant reference to the unprecedented need, the delays in the building process due in part to too many starts early in the year, materials price and wage increases, the vicious attack on all price controls, the black market in lumber and other components. Whatever the reasons, the facts available so far are too sketchy. They are for authorizations, not starts or completions. A median figure means little for a program of this kind without some knowledge of the distribution around it.

In light of this record on costs and rentals as we can piece it together today, the strange career of the Wagner-Ellender-Taft bill is very hard to understand. In fact, I for one cannot understand it. Here was a measure that had several financial provisions for helping to produce medium and low-rent housing: yield insurance, amendments and additions to FHA mortgage insurance, revisions and additions to the public housing program. It was the end result of more than a year and half of hard, patient work by its sponsors, by a special committee of the Senate, by the NHA Administrator and his staff and outside groups. It had been introduced before Mr. Wyatt came to Washington and hearings on it had been held by the Senate Committee on Banking and Currency. The sections of the bill referred to above most surely could have been modified by its sponsors if necessary to make its provisions more productive in the veterans' program. Even if they produced no rental housing before 1947 they could have been the means of re-enforcing the program's weakest sector in the second half of the campaign.

Yet despite these facts the Wagner-Ellender-Taft bill died of what looks from a distance much like neglect and malnutrition. It was introduced in the Senate on November 14, 1945; hearings were begun on November 27. By mid-April, 1946, it had been reported by the Senate Committee, passed by the Senate without a dissenting vote, and introduced in the House. There it rested, fitfully no doubt, in the House Committee on Banking and Currency until late in July when a last minute attempt was made to have it reported out before the Congress adjourned. It was then so late, however, that all the bill's opponents had to do was to ask for the kind of committee hearings that a measure of

this size and complexity no doubt deserved. The time was too short for this and the bill never got before the House of Representatives where, I am told by both its friends and opponents, it probably would have been passed.

Someday, someone ought to tell the inside story of this piece of legislative history. Mere speculation on possible explanations is not worth while. Admit, if you will, that other bills thought necessary to the Wyatt program had taken a lot of time and effort. Admit further that the passage of these measures was not good for the Wagner-Ellender-Taft bill's chances. The fact remains that a chance was lost to strengthen the program at its weakest point and it was lost without even the satisfaction of a finish fight.

With this sketch in the broadest strokes of what happened under the Wyatt program, this section of the paper must end. Later, when more time, more complete facts, and more facilities are at hand, someone should take up systematically several parts of this program to see what was done and what was learned within these divisions—even if the influence of some of them did not go very far outside. The premium payment plans for materials production, the labor recruitment and training efforts, the work, both technical and financial, on prefabricated or industrial housing and on land and site problems, the activities of the mayors' committees—all of these deserve study. And that study should begin before they become too cold and before those who can put flesh and blood around the skeleton of statistics and agency orders become interested in other things or decide there must be some easier way to make a living than being a housing bureaucrat in Washington.

Now finally I would like to suggest a few preliminary conclusions or, perhaps better, hypotheses for the truths that we should sometime sift out of the pile of facts, near facts, charges and countercharges, achievements and failures that have come from the veterans' housing program. Maybe one or two of these hypotheses will apply more broadly through the economy. Because the time is short I will put them rather bluntly. From this please do not think these opinions are dogmatic—far from it.

The longer I look at reconversion housing the more convinced I am that the biggest mistake was the repeal of L-41 in the fall of 1945. It gave about the worst possible economic and psychological setting for the attack on veterans' and accumulated civilian housing needs. Although reversed in part by PR-33 and later more completely by the Wyatt program (the first of these within a relatively few weeks), the harm was done. Every prospective builder of a nonresidential structure, from a filling station to a race track, was given the green light. Everywhere during that fall and early winter, plans and specifications were speeded up so that an early start could be made on actual construction.

Lobbyists in Washington and elsewhere concluded that if the Administration would pull out of one important consumer-protection control so quickly and on such a flimsy case, it would be vulnerable to attack on many other fronts. Many good men in Washington decided the time had come to look elsewhere for jobs; they were missed later. The intimation in the announcement of repeal that if things did not turn out as expected controls would have to be put back, fooled no one. Nationwide control actions on large sectors of the economy cannot be turned off and on successfully like a shower bath. The black markets after the Wyatt regulations were imposed as well as the price control fiasco last summer are evidence on this point.

In short and in the quaint academic language you are now used to in this paper, the early repeal of L-41 was a boner of the first order. Perhaps it is significant in some way that the two men most responsible for that action, Messrs. Snyder and Krug, are now both cabinet officers and the three who opposed it to the very end, Messrs. Bowles, Blandford, and William H. Davis, then Director of Economic Stabilization, were all out of the government service within a few months.

From the recent housing program we may gain some insight into the pros and cons, the do's and don'ts of what may be called the "goals technique" in public affairs. The evolution of this device during the war ought not to be passed over too lightly. In the kind of world we may be living in before long, it may have some unappreciated possibilities in wider fields than sales campaigns and community fund drives. And it may have dangers, too.

I have suggested already one tentative rule for running a goals program: set up your goals in units that fairly measure the end result you are trying to realize. Tentative rule number two may sound a little like Dale Carnegie: do not forget to ask how all parts of your program may sound to the people whose action is essential to its success. What may seem to you a minor inconsistency may look to them like a fatal fallacy. In other words, do not expect thousands of young fellows to rush into apprenticeships in the building trades when you say that prefabricated house production is going to rise in two years from practically nothing to 600,000 units per year.

Even if you point out that in the second year 900,000 houses will be built by conventional methods you have not satisfied the prospective apprentices—let alone those in the trades who have to agree to raising apprenticeship quotas. If young men are thinking of going into a fairly long apprenticeship for what has been traditionally an uncertain employment, they will be wondering not whether they will have a job next year but whether they will be able to make a decent living for themselves and their families five, ten, twenty years from now.

In what circumstances a goals program is likely to do more good than harm is a question to ponder. The classic example of success in this method is President Roosevelt's goal of 50,000 airplanes. But that goal was first announced in 1940 when the nation was not taking the dangers of war too seriously, when some people were content to have a good time on the first fat pay envelopes and dividend checks in some years, and when most Americans were ill-equipped by training or experience to understand the material and equipment demands of a global war. Mr. Roosevelt's demand for 50,000 planes jarred through many people's complacency, lifted their sights, stirred them to action. Was the prevailing attitude toward the veterans' housing need in February, 1946, one of complacency and underestimation? Are there other circumstances in which the nation-wide goals technique is the best means of stimulating needed action?

My next comment is related to but still separable from this inadequate discussion of the goals technique. As you all know, a current form of economic-political liberalism or progressiveness is based on the belief that we now have the technical and administrative equipment to support a much higher standard of living than most people in this or any other country have ever enjoyed or, in fact, have thought possible. The problem is to keep the economic machine operating at a reasonable percentage of capacity and to keep it fit and growing. Professor Hansen, Lord Keynes, and others have elaborated an analysis of why we have failed to do this in the past and have made many suggestions on how we can do better in the future.

A somewhat related, popular view of recent housing policy might have been put about like this: Look what we did in war production. We swamped the world with machines and equipment—tanks, jeeps, merchant ships we built in days, a bigger navy than all the rest of the world put together, radar, superforts by the thousands, landing barges by the hundreds, more guns and shells than you can count. Build a million and a quarter houses in the first year after the war? Sure—it ought to be a million and a half or two million. A quarter of a million prefabs in 1946? Why not? It's easy—make 'em in airplane plants. It's nothing to what we did during the war. Kick the old fogeys in industry and government out of the way and let somebody run who can.

All of us have heard or read statements of that kind or at least with the same import. Undoubtedly there is something to them—they just cannot be brushed aside. But in their extreme form, like my example, they may be dangerous to the very ends that their proponents seek. The analogy of war and peacetime production has some weaknesses that are not too hard to point out. I would suggest that as usually applied

to reconversion housing policy they are subject to another kind of error: they are based on a mistaken conception of the speed of war production.

The trouble seems to be that on the production front the war was a thirty-ring circus. New weapons, new inventions, new ways of doing things were coming to popular attention in a steady stream. Most of us knew little or nothing about them until they were well along in production or application. Because they came along so fast, we more or less unconsciously concluded that their development and production time must have been very short when, as matter of fact, this simply was not so for most of them. Let me try to illustrate what I mean.

In the latter stages of the war and the early reconversion period the Department of Commerce sent around to various offices in Washington a series of little leaflets on home-front items—most of them, as I recall, on reconversion problems and possibilities but with quite a few references to wartime production. One of these items has stayed in my mind; I hope the Department will continue the study of it and before long make the results generally available. It was an analysis of the time required from the cut-off date in the manufacture of one product until the new product reached either the peak output rate of its predecessor or the monthly production goal set for the new product. In other words, it was a measurement of the time required in highly organized and integrated industries to prepare for, organize, and reach volume production. It did not include time required for designing, blueprinting, building, and testing models.

Three examples were given—one from civilian and two from war production. The first was the Ford Company's shift from Model T to Model A. The second was an average of the time required in reaching full production of new aircraft models and in making some existing models in newly opened plants. The third was the time required to change over plants making civilian products to the production of a new infantry rifle. For each of these, the length of the period was about eighteen months and simple charts of output by months showed a concave curve upward.

Now, there is no magic in the period of eighteen months. Other items may have taken more or less. The nature of the output curve is significant. But for our purposes, I suggest that the most pertinent conclusion is that organizing and reaching volume production of a complicated product takes considerable time even in the best regulated industries—in peacetime or in war.

My brief description of this analysis may not be entirely accurate in all details but I am sure it is good enough for our purposes here. Neither am I saying that Ford's and the wartime performances cannot

be bettered. The moral I draw from these facts, however, is that in recognizing the great productivity of modern industries and in urging that this productivity should be turned loose for socially desirable ends, such as housing, we should temper our expectations and predictions with the hard realities of production facts. If we fail to do this, our whole line of argument may be discredited and we shall play right into the hands of those who think their interests are best served in a cautious economy of scarcity and traditionalism.

Coming back for a moment a little closer to the recent housing events, I have three more observations that I shall only mention.

In my opinion one of the weaknesses of the war housing program was its failure to hold down the sales prices of existing housing. If this had been done, considerable hardships would have been alleviated and some of the difficulties of housing in the reconversion period would be less formidable. During the war, no one seemed to have a feasible plan for controlling sales prices of an unstandardized commodity of this kind in thousands of local markets throughout the country. After the war was over we hit upon a formula that I think would have worked: allow a first sale at whatever a property would bring but make that sales price the legal maximum for that property during the rest of the necessary period of control. Of course, this principle could be modified in various ways but it seems to me basically sound and workable. When it finally was brought forward the Congress was in no mood to give it a trial.

Next, events of the last eighteen months make clear that those concerned with housing in this country, whether as government officials, large-scale operators, students, or what not, should give much more attention than we have in the past to the structure, methods, peculiarities, and potentialities of the house building business or industry—including materials manufacture and distribution. We simply do not know enough about it and apparently no one else does either. In recent years, we have centered our attention too much on housing finance and ways and means of improving it. All and all this has been time well spent but we must find ways and means of covering the other field too. We cannot do all we should in housing in the years ahead if in this area we remain at the mercy of the kind of analysis and advice—largely from people to whom housing is a third-string sideline—that has been responsible in part for the reconversion mix-ups in housing. And in saying this I am thinking not only of parts of the Wyatt program but of some of the happenings in the preceding months as well.

Finally, whatever may be said about the reconversion or long-range housing policy of the federal government, it is, I believe, a fact that most local communities are not ready for the flood of housing construc-

tion that is coming before very long—probably beginning this year if high building costs or a sharp business recession do not choke it off. City planning, subdivision control ordinances, local market analyses, and building codes are all, by and large, only a shadow of what they should be if the coming volume of new houses is to be made a factor in building more pleasant, convenient, and kindly cities and towns.

In concluding, may I repeat that no one can reach a fair judgment now on where the balance of success and failure lies in the Wyatt program; the time, many of the facts, the perspective are all lacking. Possibly this paper has given undue attention to the weaknesses of the program but I hope not. If so, it may be because it is often easier to learn from mistakes than from accomplishment. I hope also from this paper it is clear that what can only be called the failures of the program are not by any means Mr. Wyatt's sole responsibility. He could not be expected to reform over night all the weak spots in the industry, the National Housing Agency, several other government units, the Congress, and in expert and public understanding of housing issues—and all of these have contributed to the results. Whether he should not have recognized them more clearly in formulating his program is, of course, a fair but separate question.

At any rate, perhaps this paper has opened up a bit some parts of the subject and made it a little easier for others of you to carry on the exploration and study that housing economics and policy should receive in the future.

DISCUSSION

ARTHUR M. WEIMER: It is a privilege to discuss Mr. Brunsman's interesting and stimulating paper on the 1940 census of housing. He has been closely associated with the field of housing statistics for some time and has made many contributions to its development.

While he has pointed out a wide number of uses to which the materials of the 1940 census of housing have been put, it is probable that these materials would be used even more widely if more complete information were disseminated about them and their potential uses.

For example, we would expect a rather widespread use of these materials by real estate men and by mortgage lenders. While there are evidences of such uses, it is also apparent that many people in these fields do not know what kinds of materials are included in the census of housing and they have never used them. In order to secure information about the uses of these materials by real estate operators and mortgage lenders, a number of letters were sent to representative firms, associations, and individuals. These letters brought such responses as this:

I have been very enthusiastic over the use of the block statistics in my appraisal work but the spread of ten years between reports is too great. As to the material gathered—I think it is fine and very comprehensive. However, I do not believe that these reports have been used very much due to lack of publicity and to lack of training of the individual in the use of the material.

This report is from one of the outstanding appraisers in the Indianapolis area.

A mortgage lender in Chicago writes:

My opinion is that the materials in the 1940 housing census are used very little in the real estate business. . . . I should say that most of the people in the real estate business do not know that they exist. Even if they did know and used the materials, they would have difficulty in interpreting them. While I know that as a policy, the Census Bureau does not interpret their figures, it is the thought of many people that they would serve a much better purpose if analysis and interpretation were included. In the absence of such analysis and interpretation, I believe most of the census figures will be used only by research organizations and educational institutions.

Another mortgage lender writes:

We have in our files a copy of the 1940 housing census. When we first received it, we all studied the various area breakdowns and found that our own estimates as to value of improvements and the economic standing of the inhabitants were not far off the actual. These checks were comforting because facts are pretty solid backgrounds for any program, loaning or otherwise. . . . My impression of the use of these statistics is based on the fact that few people handling real estate problems are trained to appreciate the values of such statistics. Also relatively few of such folks know about these statistics.

From the president of the Federal Home Loan Bank of Indianapolis comes this statement:

I doubt that the average home builder, real estate broker, or lending institution is very familiar with the data accumulated by the census. However, in our own instance, we endeavor to obtain every bit of material on housing in Indiana and Michigan that was published by the Bureau of the Census and distributed it to the building and loan associations throughout those two states. Insofar as I know, however, no use whatsoever

was made of this material other than by the undersigned who used the materials from time to time in making estimates of the market and the like.

This report goes on to suggest the following:

. . . emphasize first the need for releasing the material while the figures are still current, and second, the need for getting it into the hands of trade association executives and other individuals similarly situated who could interpret it and perhaps get some interest in it among the business people to whom it would be useful. However, I think the major use of this type of material will continue to be made by government agencies, national manufacturers, and the like rather than by the small, local operators of various kinds.

Reactions from at least two trade association executives are interesting with respect to this latter point. One says:

Personally, I feel that the 1940 census of housing is invaluable to us in the office. Over a period of years, we have referred to it many, many times in looking for answers to questions of the public as well as our own members. . . . I do not believe that they are too technical or too complex for practical use, for if they were we wouldn't have had our own members borrowing these copies many times during the last few years.

Another trade association report is less enthusiastic but generally favorable, and stresses the point that these materials are used chiefly at the policy making level and that not much use is made of them to serve the processes of local financing. This report also states:

I believe that absentee lenders have made considerable use of the housing census. Dr. Irving Bussing of the Savings Bank Trust Company in New York State has headed up an extensive study of 148 metropolitan areas coincident to a proposed program of buying FHA mortgages (and possibly G.I. loans) on a nationwide scale. . . . From my use of these data, I feel they are very well assembled. They appear forbidding by their very massiveness but if a stranger will first look to see what they show, he will have little trouble working with those phases of the reports which are of interest to him.

A lending officer of an insurance company reports that the materials of the 1940 census of housing have proved to be extremely valuable for the purpose of making comparisons between neighborhood areas.

Next to the larger mortgage lenders, appraisers apparently made greatest use of these census materials. The *Appraisal Journal*, for example, presented in its April, 1946, issue a rather complete article by J. C. Capt, Director of the Bureau of the Census, on "Appraisal Significance of Census Statistics."

While these statements regarding the uses of the 1940 census of housing are interesting, it is difficult to determine whether they are really representative of the real estate and mortgage lending fields. The people who were invited to comment were selected with a view to securing a fairly representative group, but the coverage was not wide.

It may be that some useful purpose would be served if the Bureau of the Census or some other agency made a survey of the actual uses of the census by various types of business and governmental users prior to the taking of the next census. Such a survey might provide valuable information which would be of assistance in planning the next census.

In addition, it might be desirable to hold a series of clinics regarding the nature of the materials and some of their possible uses. Perhaps trade associations and universities could be helpful in this connection.

Mr. Woodbury has covered a broad field in a very interesting and competent manner. It may be that we need in meetings like this a little more of his "quaint academic language." His presentation of this paper will stimulate much useful thought and discussion.

Several points may be worth further consideration.

1. It may be that the Blandford and Wyatt programs hit rough going in the postwar period because our war housing program left much to be desired. It was at best a partial program. We should have rationed space when we set up rent controls and done it for both owned and rental housing. Obviously we cannot regulate half a market and in that half regulate prices without providing for the rationing of supply.

Probably we could not have maintained space rationing for very long once the war ended—but it could have been held as long as rent controls were in force and led to a more efficient use of our available supply.

2. Both the Wyatt and the Blandford programs were pointed to new construction. It seems that little attention was given to the available supply. Yet the supply of housing in 1940, despite the additions made during the war years and since, was a very large total. A million units a year would represent only about 3 per cent of that total. A 5 per cent increase in the efficiency with which real estate resources were used would have done more than a program even more ambitious on paper than that of Mr. Wyatt. Had more attention been given to an efficient use of available housing and less to new construction, which we know now cannot be stepped up very fast, we might have been better off. Of course, this would have meant facing the unpleasant fact that we could not build new houses for all the veterans as soon as they were demobilized.

3. We probably looked to the Wyatt program, as we often do in such cases, as a panacea for a whole set of problems. Unfortunately, there are no panaceas for our housing ills. We need a much broader approach to their solution than we have as yet adopted, including a heavy emphasis on the technical side, as Mr. Woodbury has suggested. Houses become more complex and more expensive rather than simpler and cheaper. Maybe we need to invent a new way of housing ourselves entirely.

4. Certainly the Wyatt program served to show all of us the multitudes of special interests and selfish persons and groups who have a stake in housing. These are facts of life which we must recognize for future guidance. These groups and persons are of all types—they are in government as well as business, in country as well as town, in labor as well as capital. We need to learn how to harness these special interests and persons together rather than to derive wedges between them or, as Wyatt did, to try to fight them.

5. Maybe we should compare Wyatt to Knutson rather than to Nelson when we evaluate this program. After all, the early war production program was not such a howling success during the period that we seemed unable to stop producing automobiles. Maybe Wyatt, like Knutson, believed the American people were patriotic on the one hand, or interested in the veteran, on the other.

MILES L. COLEAN: In commenting upon Mr. Woodbury's excellent paper, I want first to give my own interpretation of certain events early in the postwar period which is at slight variance with his.

The postwar construction program was started on two fallacies: (1) that there was going to be serious unemployment, and (2) that the construction industry had no reconversion problems and consequently could be used to take up the slack quickly.

The first step was to remove nonresidential construction from restriction on the theory that jobs would be provided not only by the work involved but also in the completed structures. With this move, the then newly appointed Construction Co-ordinator had no part, it being an accomplished fact before he had his office organized. He then proceeded along two lines: to get housing at least on a par with nonresidential construction (this meant the final abolition of the limitation order); and to restore a high volume of materials production before the spring building season. The first objective he was able to accomplish after about six weeks during which nonresidential construction pre-empted the scarce supplies then available. On the second he was thwarted by the doctrinaire attitude of OPA, and, as a result, he withdrew from the scene.

The subsequent Wyatt program was, in my opinion, a major contributor to the inflationary trend during 1946. With its exaggeration of the crisis, it created a scare psychology which produced panic buying on the one hand and extortion on the other. By pushing "starts" ahead of an adequate materials supply, it added in numerous ways to the increase in construction costs.

At the same time, Mr. Wyatt lost the confidence of those in industry upon whom he depended for success. Irresponsible demands for the achievement of impossible goals created consternation, which quickly turned to suspicion and fear as threats were made as to what might happen to industry if the goals were not achieved.

I agree with Mr. Weimer and Mr. Radcliffe that the failure to control house sales prices along with rents resulted in an inefficient use of the housing supply; but I do not believe any effective plan of control could be devised. Certainly no effective method was devised either in Britain or Canada. Nor do I follow Mr. Weimer on the need he sees for "harnessing" the elements of the industry, though I admit readily that no one part of the economy can be controlled without ultimately controlling it all. Instead, I expect improvement to follow from increasing freedom, and I believe that the results of increasing freedom are evident in the adjustments in the market already taking place.

I should like to put in a defense of lobbyists, who were used rather roughly by Mr. Woodbury. A lobbyist, as often defined, is someone who opposes your own pet measure. Anyone agreeing with you is not lobbying but exercising his constitutional right of petition. In the Wagner-Ellender-Taft situation, for instance, there were lobbies arrayed in favor of the bill just as thoroughly organized and as aggressively led as those which opposed it.

Anyone familiar with the working of our government will agree that

lobbyists play an important, if not an essential, part in it, a part officially recognized in the act reorganizing the Congress. Through them the attitudes of the numerous private interests in the country are made known to the Congress; and up to now lobbies have been almost the sole sources of information outside the executive departments. One experienced Congressman once said to me: "We live in an atmosphere of pressure. Our job is to weigh pressures." On the whole, I think Congressmen do that job pretty shrewdly and are not deceived by simulated pressures.

One word on Mr. Brunsman's paper. I have found the confusion between the terms "family" and "household" to give great difficulty in using the population and housing censuses in connection with market estimates. I am glad to know that the Census Bureau is working on this problem. And a final word on lobbying. I hope all of you, in your individual and organizational capacities, will do some effective lobbying for another housing census.

INTERNATIONAL TRADE ORGANIZATION

THE LONDON DRAFT OF A CHARTER FOR AN INTERNATIONAL TRADE ORGANIZATION

By CLAIR WILCOX
Department of State

The London meeting of the Preparatory Committee for an International Conference on Trade and Employment, in October and November, 1946, represents a single step in a long program of international collaboration with respect to trade policy in which the initiative, at every stage, has been taken by the United States. This program had its origin in the Hull Trade Agreements legislation in 1934 and found expression in the Atlantic Charter in 1941, the Mutual Aid Agreements in 1942, and the Bretton Woods Agreements in 1944. In 1945, it motivated the renewal of the Trade Agreements Act, the conclusion of the Anglo-American Financial Agreement, the publication of the *American Proposals for Expansion of World Trade and Employment*, and the issuance to fifteen other countries of invitations to participate in trade agreement negotiations. In 1946, it led to the adoption by the Economic and Social Council of a resolution, introduced by the United States, providing for the calling of an International Conference on Trade and Employment and setting up the Preparatory Committee; to the preparation, circulation, and publication by the United States of the *Suggested Charter for an International Trade Organization*; to the discussion of this draft with the other governments represented on the preparatory committee; and to its adoption by the Preparatory Committee as the basis of the deliberations at its first meeting.

The next steps, in their chronological order, are the public hearings on the tariff list in Washington, beginning on January 13, 1947, the meeting of an Interim Drafting Committee in New York, beginning on January 20, 1947, the public hearings on the draft charter in Washington and other cities, beginning on February 25, 1947, the second meeting of the Preparatory Committee, incorporating the trade agreement negotiations, in Geneva, beginning April 10, 1947, and the International Conference on Trade and Employment sometime in the fall of 1947. The instrument that emerges from this conference will be submitted to the Congress of the United States and to the governments of other countries, and, with their approval, the International Trade Organization should be established sometime in 1948.

At its meeting in London, the Preparatory Committee considered drafts of texts of eighty-nine articles prepared for possible inclusion in

a charter of an International Trade Organization. On two of these articles (those dealing with complete state monopolies of import trade and with relations with nonmembers) it deferred action until its second meeting. On eleven articles (dealing primarily with formal and organizational matters and with indirect forms of protection) it referred the texts to the Interim Drafting Committee. On two other articles (dealing with voting in the International Trade Organization and with membership on the executive board of the Organization) it came to no agreement and instructed the Interim Drafting Committee to prepare alternative drafts. On the other seventy-four articles, covering all of the important substantive questions that were before the committee, and most of the detailed provisions with respect to organization, it came to wide agreement. On two of these articles, three delegations recorded reservations and fourteen agreed. On three others, two delegations recorded reservations and fifteen agreed. On each of six others, one delegation reserved its position and sixteen agreed. On the remaining sixty-three articles, agreement was unanimous.

It should be emphasized that the work of the meeting was carried on at the expert level, that the negotiations were preparatory rather than conclusive, and that the positions taken involve no final commitments. It is nonetheless true that the committee has carried the work of drafting a world trade charter to a stage that should make possible its approval without major changes in principle.

At its final session, the committee also approved the reports of six subcommittees, outlining in detail the issues discussed, the views expressed, and the agreements reached on employment, economic development, commercial policy, restrictive business practices, commodity arrangements, and organization. The report of the subcommittee on commercial policy includes a detailed memorandum on "Procedures for Giving Effect to Certain Provisions of the Proposed I.T.O. Charter by Means of a General Agreement on Tariffs and Trade Among the Members of the Preparatory Committee." Approval of this memorandum establishes an agreed procedure to be followed in the reciprocal trade negotiations at Geneva this spring. In the meantime, it commits the governments concerned, morally if not legally, to a trade restriction truce.

The problems to which the meeting devoted the major part of its attention, and the problems which were most important from the point of view of the United States, were those arising in the field of commercial policy. Here, the pattern adopted, as suggested in the American proposals, was the enunciation of a general rule, the enumeration of specific exceptions to the general rule, narrowly limited and precisely defined, the establishment of regulations and procedures whereby mem-

bers of the Organization may avail themselves of these exceptions, and the provisions of penalties that may be imposed in cases of violation. This pattern can best be illustrated by its application to the principal issue that came before the meeting: the desire of many countries to retain a large measure of freedom to impose quantitative restrictions on their trade and the insistence of the United States and certain other delegations that quantitative restrictions should be condemned in principle and that the right to employ them should be strictly limited.

I. Quantitative Restrictions and Exchange Control

In the London draft, the general rule with respect to quantitative restrictions is stated as follows: "no prohibition or restriction, other than duties, taxes, or other charges, whether made effective through quotas, import licenses or other measures, shall be imposed or maintained by any member country, on the importation of any product of any other member country, or on the exportation or sale for export, of any product destined for any other member country."

Detailed exceptions to this general rule permit the use of (1) transitional export or import prohibitions designed to effect the equitable distribution of products in short supply, the maintenance of wartime price control, and the orderly liquidation of government surpluses and war industries, (2) temporary export restrictions designed to relieve critical shortages of foodstuffs and other essential products, (3) controls required to enforce the observance of standards for the classification and grading of commodities, (4) export or import quotas established under intergovernmental commodity agreements, (5) restrictions designed to confer a monopoly upon a state-trading enterprise, and (6) import quotas on agricultural and fisheries products required to enforce domestic production and marketing restrictions and surplus disposal programs, provided that such quotas do not reduce the share of imports in the domestic market.

Of greater importance is a final exception which permits a member of the Organization to employ import controls as a means of safeguarding its balance of payments. Here the test is the member's need "(1) to stop or to forestall the imminent threat of a serious decline in the level of monetary reserves, or (2) in the case of a member with very low monetary reserves, to achieve a reasonable rate of increase in its reserves." Under this provision, a member may also "select imports for restriction on the grounds of essentiality," but it "shall avoid all unnecessary damage to the commercial interests of other members" and it shall not carry such restriction "to the point at which it involves the complete exclusion of imports of any class of goods."

A member considering the imposition of new restrictions is required

to consult with the Organization "as to the nature of its balance of payments difficulties, the various corrective measures which may be available, and the possible effects of such measures on the economies of other members." A member maintaining or intensifying existing restrictions may also be required to consult with the Organization at any time with regard to "alternative methods . . . of meeting its balance of payments difficulties." The International Monetary Fund is to be invited to participate in all such consultations.

Any member may complain that another member is employing quantitative restrictions in a manner inconsistent with the provisions of the charter or unnecessarily damaging to its trade. The Organization will then consider the complaint, in consultation with the International Monetary Fund, and if it is found to be justified, may recommend the withdrawal or modification of the restrictions in question. If the offending member does not comply with its recommendation, the Organization may then release the other members, in whole or in part, from their obligations toward the member in question, permitting them, for instance, to withhold from it the tariff concessions which they have made.

In order to avoid the imposition of such a penalty, a member may request the Organization to give prior approval to restrictions which it desires to maintain or to impose or to a statement of the circumstances under which such restrictions may be imposed. The Organization, after consulting the International Monetary Fund, may grant such approval, specifying the general extent, degree, and duration of the restrictions permitted. Thereafter, no other member may successfully challenge the legitimacy of the restrictions falling within the scope of the approval, but a member may still seek redress for unnecessary stringency in their application to particular products.

Members are required to relax their quantitative restrictions as the difficulties which justified their imposition are improved and to eliminate them entirely when such difficulties disappear. Within two years of its institution, the Organization is required to call into question all restrictions then in use. And finally, whenever the employment of quantitative controls, under the foregoing provisions, is so persistent and widespread as to indicate the existence of general disequilibrium, the Organization, in collaboration with the International Monetary Fund, is directed to "initiate discussions to consider whether other measures might not be taken, either by those countries whose balances of payments are under pressure or by those countries whose balances of payments are tending to be exceptionally favourable, or by any appropriate intergovernmental agency or agencies, to remove the underlying causes of the disequilibrium."

In those cases in which the use of quantitative restrictions is permitted, there is a general rule which prohibits discrimination in their administration. The methods of applying this rule, in the order of their desirability, are listed as follows: (1) avoidance of allocation among sources of supply by announcing global quotas or by issuing licenses unrestricted as to source, or (2) announcement of allocations established on the basis of commercial principles through agreement among exporting countries, or, if this is not practicable, by reference to the share supplied in a previous representative period, subject to consultation at the request of the Organization or any of its members. It is further provided that members thus restricting imports shall supply adequate information concerning the administration of their controls.

Exceptions to this general rule permit the discriminatory administration of quantitative restrictions for the following specific purposes: (1) to enable members, until the end of 1951, to assist countries whose economies have been disrupted by war, (2) to enable them to conform to the provisions of intergovernmental commodity agreements, (3) to permit them to use import quotas, insofar as the International Monetary Fund permits them to use exchange controls, to ration scarce currencies, (4) to enable a group of territories with a common quota in the Fund to protect their common monetary reserves, (5) to enable members so to control their exports as to obtain convertible rather than inconvertible currencies, and (6) to enable them to use inconvertible currencies to pay for imports, where this would involve an addition to the volume of imports that would otherwise obtain and where the discrimination either would parallel exchange controls permissible under the Articles of Agreement of the Fund or would have the prior approval both of the Fund and of the I.T.O. Provision is made for the possible elimination of this final exception when general convertibility of currencies has been restored or, at least, by the end of 1951.

If any of these restrictions is applied in a manner which is inconsistent with the exceptions provided or which discriminates unnecessarily against the trade of another, and if the use of such restrictions has not been previously approved, the Organization, after consultation with the Fund, may direct the offending member to modify or remove the discrimination within sixty days.

Since quantitative restrictions and exchange controls may be employed alternatively to affect the flow of trade, it is important that the rules that govern these two devices should be laid down and administered with such consistency that it will be impossible, by resorting to one of these devices, to escape from the rules that govern the other. Accordingly, the London draft provides that members "will not seek by exchange action to frustrate the purposes of this charter and that

they will not seek by trade action to frustrate the purposes of the Articles of Agreement of the International Monetary Fund." The committee, moreover, took the view that every member of the I.T.O. should be a member of the Fund or, failing this, that a nonmember of the Fund should be required to enter into a special exchange agreement with the I.T.O. and that this agreement should be established and administered in collaboration with the Fund.

The present draft is a complete revision of the American text. But it preserves the general approach and the essential principles of the original proposals and strengthens them in many ways. It eliminates the transition period provided in the earlier version and brings the balance of payments test into play immediately upon the establishment of the Organization. It affords greater flexibility in the exceptions permitted to the rule of nondiscrimination. But, at the same time, it provides more adequate safeguards and more effective supervision through the collaboration of the International Monetary Fund and the I.T.O. On balance, it represents a distinct improvement over the previous draft.

It will doubtless be said, in criticism of the charter, that the general rule condemning quantitative restrictions will be of little value if exceptions are allowed, but these exceptions have been realistically devised to meet the actual conditions that now prevail throughout the world. They were dictated, not by political expediency, but by economic necessity. Without them, the general rules could not be accepted or, if they were accepted, could not be expected to work. Clearly, it would have been unwise to have proposed a rule so rigid that it could not be enforced. As a practical matter, our only choice is between a rule that condemns quantitative restrictions in principle, limits them to exceptional cases, and subjects them to international control and a situation in which any nation, at any time, will enjoy complete freedom to impose quantitative restrictions as extensively and intensively as it may choose. Confronted with such a choice there can be no question as to where our interest lies.

II. *Tariffs and Preferences*

Under the present draft, members of the Organization are committed to enter into reciprocal and mutually advantageous negotiations directed toward the substantial reduction of tariffs and the elimination of preferences. Members who, in the judgment of the Organization, have unjustifiably failed to fulfill this obligation may be denied the benefits of the tariff concessions that are made to others. A new clause, inserted in London, provides that the binding of low tariffs or tariff-free treatment shall be recognized as a concession equivalent in value to the

reduction of high tariffs. Otherwise the rules to govern the process of tariff bargaining are identical in substance with those originally proposed by the United States and accepted by the United Kingdom. Prior commitments are not to be permitted to stand in the way of negotiations with respect to preferences. And reductions in tariffs are to operate automatically to reduce or eliminate margins of preference. With quantitative restrictions limited to exceptional cases and brought under international control and with preferences subject to reduction or elimination through the operation of an agreed rule, a firm basis has been established for the negotiation of reciprocal agreements for the binding or reduction of tariff rates. *

With respect to discrimination in customs duties, the general rule requires members to accord to one another general unconditional most-favored-nation treatment. Exceptions to this rule permit the maintenance of such preferences as may survive the process of reduction or elimination during tariff negotiations, preferences incidental to the formation of a customs union, and new preferential arrangements that may be approved, in exceptional circumstances, under the provision of the charter, as originally drafted, that permits the conference of the Organization, in special cases, to waive an obligation of a member by a two-thirds vote.

The present draft retains a provision, modeled after the escape clause in the trade agreement with Mexico, which permits members to withdraw or modify tariff concessions they may have made, in the event that imports so increase as to "cause or threaten serious injury to domestic producers." A member taking such action is required to consult with the other member affected, but may proceed without its consent. In this case, however, the latter member may, in turn, suspend concessions made to the former member to any extent that the Organization may approve.

The provisions in this section closely follow the original American draft and, up to the present, have evoked little comment in the United States.

III. *Employment*

The United States proposed, in its suggested charter, that each member of the I.T.O. should take action designed to achieve and maintain full employment within its own jurisdiction through measures which are not incompatible with undertakings designed to promote an expanding volume of international trade. Certain of the countries attending the London meeting expressed the view that greater emphasis should be given to the objective of full employment. But none of them proposed the delegation to an international agency of any authority that

would enable it to make an affirmative contribution to this end. The only commitment with respect to the maintenance of employment in the London draft corresponds closely to that proposed by the United States. It provides that each member of the I.T.O. "shall take action designed to achieve and maintain full and productive employment and high and stable levels of effective demand within its own jurisdiction through measures appropriate to its political and economic institutions and compatible with the other purposes of the Organization."

This provision is likely to be attacked from two sides. Those who read into the objective of full employment a commitment to deficit spending and work relief will object to the very mention of the words. Those who believe that the attainment of this objective is imperative will complain that members are committed not to assure full employment but only to take action that is designed to achieve that goal and that the charter confers upon no international agency the authority to take affirmative action in this field. To the first group it may be said that full employment is defined, in the committee report, in the words of the Employment Act of 1946, as a condition in which useful employment opportunities are available to all those able and willing to work and that the measures that any nation may adopt for the purpose of achieving this condition are for it alone to choose. To the second group it can only be said that the success of domestic measures designed to maintain employment cannot be guaranteed; that thinking with respect to the functions that an international agency might perform in maintaining employment is still in the embryonic stage; and that the delegation to such an agency of any authority in the matter is not within the realm of practical politics. The charter does, however, give formal recognition to the necessary relationship between policies affecting employment and those affecting trade.

The principal issues considered in the discussions on employment arose from the fear expressed by certain countries that participation in a freer trading system might make it more difficult for them to maintain their domestic employment programs. To explain this fear, it was argued that one country, if it were a large factor in world trade, might exercise deflationary pressure on others in one of two ways: first, by buying too little from abroad and investing too little abroad in relation to its exports; and second, by falling into a depression which would involve a serious or abrupt decline in its effective demand for imported goods.

To meet the first situation, it was proposed that each member of the Organization should agree to take action designed to assure that its currently accruing international receipts are fully utilized for international payments or for investment abroad. In the draft that was

finally adopted, this proposal does not appear. Instead, it is provided that each member shall agree "that, in the case of a fundamental disequilibrium in its balance of payments, involving other countries in persistent balance-of-payments difficulties which handicap them in maintaining employment, it will make its full contribution to action designed to correct the maladjustment," and the accompanying report explains that "the particular measures that should be adopted [e.g., the stimulation of imports or the removal of special encouragement to exports, an appreciation of the country's exchange rate, an upward revision of its internal cost and price structure, an increase in foreign investment, etc.] should, of course, be left to the government concerned to determine." As it stands, the article serves the useful purpose of calling to the attention of the members of the Organization the fact that those who expect to sell must be prepared to buy.

To meet the situation created by a serious or abrupt decline in international demand, it was proposed that one member might complain to the Organization that another, by failing to maintain its demand, had prevented the complaining member from maintaining employment and that the Organization might then release this member from its obligations with respect to trade. This proposal was substantially modified in the final draft. Under the terms of a general provision of the charter, if a member considers that any other member has adopted a measure, or that any situation has arisen, which has the effect of nullifying or impairing any object of the charter, including the object of maintaining employment, the members concerned shall enter into consultation with a view to effecting a satisfactory adjustment of the matter. If no adjustment is thus effected the matter may be referred to the Organization, which shall then make an investigation, if necessary consulting with the Economic and Social Council and with other specialized international agencies, to determine what remedial action may be available, and shall recommend such action to the members concerned. In particularly serious cases, the Organization may authorize the suspension of specific obligations assumed under the charter. But no member may suspend such obligations without the permission of the Organization. It is further provided that the Organization shall have regard, in the exercise of this function, "to the need of members to take action . . . to safeguard their economies against deflationary pressure in the event of a serious or abrupt decline in the effective demand of other countries."

The effect of these provisions is to afford a country a means of obtaining a partial release from its commitments with respect to trade policy in the event that its economy is seriously affected by a depression originating outside its borders. In such a situation, however, it is likely that the country concerned would be in balance-of-payments difficulty.

It is therefore doubtful that these provisions afford any prospect of release that was not already available under the balance-of-payments exception in the American draft. It would be illusory, in any case, to hold that liberal trade commitments can be enforced if the world is again plunged into a major depression. Here, again, the charter does no more than recognize the facts of life.

IV. *Economic Development*

One of the purposes of the Organization, as set forth in the suggested charter prepared by the United States, is "to encourage and assist the industrial and general economic development of member countries, particularly of those still in the early stages of industrial development." It was the opinion of many of the delegations attending the London meeting that this problem, too, should receive greater emphasis than it was accorded in the American draft. To this end, a long list of proposals was advanced. It was suggested, for instance, that an industrial country with a favorable balance of payments should assume an obligation to provide capital to countries in the process of development; that it should recognize that such capital would have to be provided on a nonremunerative basis; that industrialization and diversification should be accepted as sufficient justification for the imposition of trade restrictions; that these restrictions should be imposed on the basis of decisions made by national tribunals in accordance with such criteria as they might employ; and that industrial countries should recognize the necessity of contracting particular industries as these industries expand elsewhere. None of these proposals was accepted.

The London draft, as finally adopted, contains a new chapter on economic development that was prepared and introduced by the delegation of the United States. Under the terms of this chapter, members agree to promote the continuing development of their respective territories and to co-operate through the Economic and Social Council and through international specialized agencies in plans and programs and in the provision of facilities required for such development. Members exporting these facilities agree to impose no unreasonable impediments to their exportation and members importing them agree to take no unreasonable action injurious to the interests of those who provide them. A proposal that the I.T.O. assume jurisdiction over the function of providing technical assistance to countries in the process of development has been referred to the Economic and Social Council for its opinion.

Here again, however, the principal issue was created by the desire of many countries to promote industrialization by restricting imports. Under the suggested charter, countries were free to subsidize domestic production and to impose or raise tariffs on products that were not

covered by trade agreements. But many delegations sought freedom to impose or raise tariffs on other products and to employ import quotas to protect new industries. The final draft does not afford such freedom, but it does establish a procedure through which permission to make a limited use of these restrictions may be obtained. Under this procedure, the I.T.O. will consider the case presented by the applicant and the views of other members whose trade would be substantially affected, in the light of such criteria as to productivity and other factors as it may establish. It may then decide either to drop the case or to proceed. If the product in question has not been covered in a trade agreement, the Organization may, in its discretion, grant the applicant permission, within such limits as it may fix, to impose restrictions that are otherwise proscribed. If the product has been so covered, however, the Organization must sponsor negotiations between the applicant and the members affected and cannot grant such permission unless substantial agreement is achieved.

The United States made this concession in recognition of the insistent pressure for industrialization that is felt in every corner of the globe. It was the only case in which the delegation departed from the principles that were elaborated in the American draft. But it was this compromise that brought the meeting close to unanimous agreement. And the draft, as it stands, establishes a new principle in international affairs: that quantitative restrictions on trade are not to be employed, without international sanction, for the development of infant industries.

V. Restrictive Business Practices

On the international cartel problem, the London draft follows the pattern originally proposed by the United States. Its provisions apply to business practices in international trade which "restrain competition, limit access to markets, or foster monopolistic control," whether they are engaged in by a single private enterprise or by a group which includes within its membership private enterprises or public enterprises or both. These practices are to be judged by their effects and are to be condemned whenever they interfere with "the expansion of production and trade and the maintenance in all countries of high levels of real income." Each member agrees to "take all possible steps, through legislation or otherwise, to ensure that . . . enterprises within its jurisdiction do not engage in practices which have [this] effect." A member may complain to the I.T.O. that "specific practices exist which have or are about to have the effect described." The I.T.O. will then make an investigation, hold hearings, and if it finds that the practices in question have such an effect, may "request each member concerned to take every possible action to prevent the continuance or recurrence of the

practices and, at its discretion, recommend to the members concerned remedial measures to be carried out in accordance with their respective laws and procedures." Each member agrees "to take the fullest account of the Organization's findings, requests, and recommendations . . . in considering the initiation of action . . . to prevent . . . the continuation or recurrence of [these] practices," to report on the action taken and, in cases in which no action is taken, "to explain to the Organization the reasons therefor and discuss the matter further with the Organization if requested to do so."

In this case, again, criticism will come from two extremes. It will be said that the chapter goes too far, subjecting domestic business to international control and limiting its freedom to participate in foreign market-sharing schemes. It will be said that the chapter does not go far enough, providing a forum for international discussion instead of outlawing cartels per se. But as far as this country is concerned, the plan does not go beyond the provisions of the antitrust laws. And for most other countries, it involves a greater commitment than anyone had any reason to expect. Certainly a beginning has been made; a principle has been established; specific cases can be called into question; the pressure of world opinion can be brought to bear. Beyond this it is not now practicable to go.

VI. *Commodity Arrangements*

The chapter on intergovernmental commodity arrangements has been completely reorganized and substantially improved. It retains all of the principles and most of the text of the American draft. The circumstances under which governments may enter into agreements regulating the production, export, import, or prices of primary commodities are carefully defined. Such agreements are limited in duration and subject to periodic review. They must assure the availability of adequate supplies. They must "afford increasing opportunities for satisfying world requirements from sources from which such requirements can be supplied most effectively and economically." And countries participating in such agreements are required to formulate and adopt a program of economic adjustment designed to make them unnecessary. All commodity arrangements must be open to participation by any member of the Organization. They must afford consuming countries and producing countries an equal voice. And they must be accompanied, at every stage, by full publicity.

This chapter, as many of the others, will draw fire both from the right and from the left. Those who oppose all commodity agreements will say that it compromises with evil; that government cartels should be outlawed along with private cartels. Those who seek the creation

of large numbers of such agreements will complain that its restrictive provisions will make them too hard to get. Between these two positions, the chapter occupies a middle ground. It neither prohibits commodity agreements nor promotes them. It attempts to prevent abuses of the sorts that have arisen in the past. It seeks to establish principles that are economically defensible and morally sound. It marks the first approach toward agreement on international policy in this field.

The foregoing review has set forth at length the provisions of the London draft that deal with quantitative restrictions. This has been done because these provisions are central and because they illustrate the pattern which has been followed in the document as a whole. The review has outlined, though less fully, the closely related provisions that have to do with exchange control, tariffs, and preferences, employment, and economic development and the chapters devoted to restrictive business practices and commodity arrangements. It has not covered the provisions that are concerned with subsidies, state trading, and the organization of the I.T.O. On each of these matters the London text adheres closely to the American draft.

The present document undoubtedly contains some passages that are obscure, ambiguous, or inconsistent. In some cases, such defects mark the outcome of a hard-fought compromise. In others, they are the inadvertent product of the collaboration of some two hundred people during six weeks of steady work. But, on the whole, this work was well done. The committee came to a series of agreements that expresses not the lowest common denominator but the highest common denominator of their several views. And they embodied these agreements in a charter which has achieved a better balance, a greater realism, and a finer precision than the draft on which they built.

THE FUNCTIONS OF AN INTERNATIONAL TRADE ORGANIZATION: POSSIBILITIES AND LIMITATIONS

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I

For the first time in history, the nations of the world are seriously facing the peacetime task of establishing international economic co-operation on a highly institutionalized basis. The task comprises agreement both on a body of rules and principles and on a set of agencies to facilitate their application. The peacemakers of 1919 saw no need for such endeavor. Following the reconversion period, the length and difficulty of which nearly everyone was then inclined to underestimate, the community of nations was expected to return to the happy "normalcy" of the gold standard and a comparatively unhampered flow of goods, services, and investment capital. Today, it seems that the world would slip back into the chaotic restrictionism of the prewar years unless the major trading countries will act jointly in blocking this trend.

The rapid disintegration of world commerce during the interwar period is a familiar story that need not be retold. Yet, in appraising the pressing need for and the potential limitations of international economic co-operation today, two aspects of this decline must never be lost sight of; namely, the ever increasing intervention of the state in national economic affairs and the substantially nationalist orientation of this interventionism. Half a century ago, just as today, the world was divided into a multiplicity of sovereign states but the economic significance of national boundaries was then comparatively slight, competitive market forces were accorded plenty of scope to direct resource allocation and—as far as transportation costs permitted—something approaching a world economy was in existence. While—despite sundry exceptions—over-all state policy in the economic sphere was still one of *laissez faire*, there was relatively little need for international co-operation on economic matters.¹ A workable trading system could be sustained by general adherence to a few simple concepts such as that of equality of treatment.

Today, the world economic scene looks vastly different. Even before the war, it had become obviously anachronistic to speak of a world economy. What had once been relatively free world markets had in

¹ Even then co-operation was needed on such specific problems as the fisheries, the slave trade, and the economic development of backward countries.

most cases disintegrated into a congeries of tightly protected or insulated segments, the free-market mechanism was largely deprived of its function with respect to resource allocation and, as a result, the volume of trade tended to contract. As the sovereign states increasingly intervened in economic processes—be it in the name of military preparedness, economic or social stability, speedy industrialization, or other goals—it was fascinating to observe the apparent inevitability with which intervention turned out to be restrictive of international trade. Four over-all results may be singled out: (1) national economic systems became increasingly heterogeneous, a fact which variously affected the conditions and methods of foreign trading; (2) even where free-market forces were still operating internally within wide functional areas, protectionism and the pursuit of autonomous fiscal and monetary policies entailed a marked insulation of national price structures which, in turn, tended to perpetuate the need for protection; (3) since government intervention underwent frequent changes of method and objective, world trading conditions became more and more precarious; and (4) many forms of government interference with international transactions made discrimination administratively hard to avoid, even if discrimination was not deliberately practiced for the economic or political advantages it can secure.

This development indicates that, in a world divided into numerous sovereignties, the widespread practice of national intervention makes highly organized forms of international economic co-operation imperative if trade is to expand and maximize mutual economic advantage. The very same conditions, however, also indicate the immense impediments in the way of such collaboration. The war seems to have enhanced the potency of the forces which produced these conditions. Nearly everywhere further claims are made for state action to guide and force capital accumulation, or to guarantee full employment, or to protect high wage levels, or to augment social security outlays, or to spare vested interests the pains of economic change, or in various other ways to redistribute the national income. In many countries, new industries and trades are being nationalized and the impression of a growing diversity of national economic systems is accentuated by sharp ideological and political cleavages. A reversal of this trend cannot be anticipated at this time. Nor is it certain that the eventual termination of the postwar transition period will greatly decelerate it. It is all the more urgent,² therefore, that the nations attempt by joint action to prevent world trade from being still more precarious and restricted than it was in the thirties.

² At least to those who believe that foreign trade is still capable of contributing materially to economic welfare.

Are the nations ready for a greater degree of economic co-operation? The complex genesis of prewar restrictionism cannot be discussed here; but it may be permitted to offer a few generalizing observations. During the interwar period, many nations increasingly pursued objectives—such as preparation for war or the maintenance of a given occupational structure—which made a substantial retreat from the international division of labor indispensable. Potential gains from foreign trading were sacrificed for the sake of conflicting ends that can scarcely form the subject of international economic collaboration. The history of the interwar period, however, also shows that, in undertaking a retreat from the world market, nations were frequently actuated by common problems, fears, and desires—the problems inherent in international monetary disorder, the fear of ever more precarious trading conditions, the desire for a greater measure of stability, and so forth—all considerations that admit of, if indeed they do not require, co-operation. It is such problems, common to many nations, affecting all nations, and satisfactorily soluble solely by co-ordinated action, that are the proper subjects of international economic collaboration today.

The skeptic may contend that a profound lack of unity and trust among nations is the fundamental reason precluding such co-operation now as it did in the past. Yet lack of unity and trust only make co-operation difficult; they do not necessarily preclude it. To say that nothing worth while can be achieved unless fundamental causes are attacked is an unproductive approach in any political field. It leads either to the blueprinting of utopian solutions or to the counsel of despair. If the kind of international economic co-operation we want in the future did not materialize in the past, it was partly because there was no driving initiative in this direction but in part also because there were no agreed rules and ready facilities required for co-operative action. Again, there were no agreed rules and ready institutions largely because there were no agreed doctrines on diagnosing problems and on appraising the full effects of alternative remedies. Over a very large section of the world such doctrines are now in an advanced stage of evolution, and it is precisely the task of statesmanship today to explore the full extent of agreement and to lay down a common code and set up international institutions so that common troubles can be met jointly.

II

The strong and the weak points of the United States scheme for a reformed trading system can be profitably examined against this general background. I do not intend, however, to analyze the technical details of the various proposals. My intention rather is to appraise

some vital portions of the program and to ask how they measure up to the potential opportunities and limits of international co-operation.

The American proposals are admirable in their over-all object of according far greater scope than prevailed during the thirties to the productivity- and income-raising effects of international specialization and of freeing commercial transactions from the disturbing injection of political considerations. Likewise, the American scheme is commendable for its endeavor to remain within the bounds of the practicable. Numerous exceptions and qualifications are appended to most of the general rules suggested. The program obviously purports to be undogmatic and flexible in bowing to political realities both at home and abroad. The question is whether in so tempering the spirit of reform with an awareness of powerful impediments, the authors of the scheme were as considerate of the impediments burdening other governments as they were of those affecting their own.

A first answer to this question is suggested by the manner in which the American program has been received abroad. In principle it has been supported by several countries. However, such support rarely extended to all specific rules proposed and often was obtained, in part at least, as a *quid pro quo* for United States assistance, past or prospective. As far as criticism was voiced officially, its general tenor bespoke the unmistakable desire for a trading regime less rather than more liberal than that outlined in the suggested charter. Quite aside from the principal opposition emanating from the Soviet sphere of influence, it is hard to escape the impression that most countries are reluctant to relinquish protective and restrictive devices to the full extent projected by the United States.

While not denying the benefits of freer trade, many of these countries seriously doubt that these advantages are worth the risks, the painful adjustments, and the obstruction of other national objectives implicit in an advanced degree of international economic interdependence. This attitude is bred by considerations too complex and numerous to be discussed here. Suffice it to single out those misgivings which figured prominently at recent international conferences. With their freedom to employ foreign-exchange control over current transactions and to resort to unilateral exchange alterations severely limited by participation in the International Monetary Fund, many governments are fighting hard to retain the right to impose quantitative trade restrictions. The American suggested charter contemplated the general elimination of such controls and provided for exceptional and temporary exemptions from this rule only under certain circumstances. At the London meeting the Preparatory Committee of the United Nations on Trade and Employment, war-weakened nations pleaded their inability to con-

duct trade without quantitative controls for an indeterminate period of time; economically underdeveloped countries insisted that their programs of rapid industrialization required the tight regulation of foreign transactions; and a majority of nations advocated the retention of quantitative import restrictions as a means of combating deflationary impulses generated abroad.

The case of the countries devastated and disorganized by war is undoubtedly strong. Economic rehabilitation is their overriding concern, and while their abnormally large needs for foreign purchasing power are in striking contrast to their abnormally reduced capacities for earning it, the balance-of-payments position of these nations will remain weak and all available foreign exchange will have to be allocated according to planned priorities.³

The case of the economically underdeveloped countries is perhaps less convincing. It is clear that several of these countries want to industrialize with little regard for economic considerations and want to do so with haste. They may believe it necessary to ration available foreign exchange in support of development programs and, denied resort to foreign-exchange control by membership in the I.M.F., they wish to be free to impose quantitative import restrictions. These nations may resort to state trading or stay outside the I.T.O. if this right is flatly refused to them. Moreover, though their case may lack cogency, their intense desire for industrialization at almost any price cannot be criticized strongly as long as the industrially advanced countries are equally determined to protect their primary producers and are in a position to do so without quantitative restrictions chiefly because of their superior development.

The third ground on which the ban against quantitative controls has been attacked reveals a more formidable obstacle to international economic collaboration. Many governments contend that, while the American proposals advocate moderation or removal of restrictive policies for the sake of freer trade, they are ill-designed to assure the maintenance of high and stable levels of effective demand for foreign goods, that recurrent world depression remains a distinct risk of international economic interdependence, and that individual nations—bent on preserving high levels of domestic employment—require a reliable defense against deflationary impulses generated abroad. Apparently unconvinced that the scarce-currency clause of the I.M.F. will be invoked with dispatch, many countries wish to make sure that they can administer effective and discriminatory import controls as soon as foreign

³ The balance-of-payments difficulties of such countries, needless to stress, are also affected by their tariff structures and by monetary maladjustments.

depression begins to be reflected in their balance-of-payments positions.

At the London conference these points of criticism resulted in significant amendments to the United States proposals. The American suggested charter had not given any special consideration to the needs of the economically less developed countries. It had proposed that war-devastated countries should remain free to apply quantitative restrictions for a brief transition period. Thereafter, they—like all other countries—would have been entitled to apply for individual and temporary exemptions from the rule against this type of control if such action proved necessary to arrest a long-continuing or large deficit on current account in their balance of payments or to forestall such a deficit in the case of members with very low monetary reserves. Member countries thus allowed to adopt such restrictions would have been bound to apply them as nearly uniformly as practicable to all important products and, in general, not to discriminate between different sources of supply.

In some respects, the new draft charter is more stringent than the original American proposals. Thus it discards the concept of a definite transition period during which war-weakened countries would remain absolutely free to apply quantitative controls. Also, when countries intensify existing restrictions or impose new ones, the I.T.O. is now specifically authorized, not only to pass on the basic need for such controls, but also on their extent and form. The major modifications, however, point clearly in the opposite direction. The original balance-of-payments criterion for permitting the temporary use of quantitative restrictions has been retained. The I.T.O. remains entitled to review—in consultation with the I.M.F.—the nature of the balance-of-payments difficulties experienced by the applicants and to consider alternative corrective measures. Yet it is now recognized unambiguously that member countries may need quantitative restrictions as a means of safeguarding their external financial position when this position is jeopardized by an increased demand for imports arising from their specific employment, reconstruction, development, and social policies. The I.T.O., it seems, has no right to request a revision of such policies should they be instrumental in bringing about a disequilibrium in the applicants' balance of payments. In special cases, countries in pursuit of economic development may be permitted to employ quantitative import controls even if such restrictions are not required on the basis of their balance-of-payments position. Finally, the draft charter is more flexible than the American suggested charter in permitting the discriminatory use of quantitative restriction. For purposes of restriction, members may select imports on the grounds of essentiality in such

a way as to promote their employment, reconstruction, development or social policies.⁴ Until the end of 1951, war-debilitated countries may also discriminate to a moderate extent between different sources of supply.⁵

These amendments to the American suggested charter may be deplored on the ground that the door is left open for the re-emergence of restrictive and discriminatory practices on a large scale. This is true especially if the rules on quantitative controls are appraised in conjunction with the means of escape provided for in the "nullification and impairment clause." It is also arguable, however, that such compromise on principle is compensated for by an increased flexibility, permitting adaptation to future trading conditions as yet unknown. In several ways, moreover, the weakening of the proposed commercial code is compensated for by a strengthening of the I.T.O. itself. While the future commercial code will be less self-executory, the I.T.O. will have more discretionary power than was originally proposed by the United States. This, to be sure, places a heavy strain on continuous international economic co-operation and the magnitude of this burden must not be underrated in view of the growing diversity of national economic structures, organizations, and policies. If generally adopted; however, the new charter surely promises future trading conditions vastly superior to those of the thirties. The use of quantitative restrictions is subject to consultation and review, and the proposed procedure for complaints and penalties is likely to deter member countries from unduly exploiting their rights under the charter. If the Bretton Woods institutions discharge their functions with success and if world trade is kept reasonably large and stable, then there is no reason to suspect that the exceptional use of quantitative import controls will be more in evidence than their general proscription. It is difficult to see how any liberal trading regime could survive should such conditions fail to materialize.

III

To accommodate the needs of other countries it was admittedly necessary to modify the American proposals on quantitative trade restrictions. It may nevertheless be questioned whether the new draft

⁴ But in so doing, "the member shall avoid all unnecessary damage to the commercial interest of other members and will accept an invitation to consult with any other member which considers its interests damaged." Also, in imposing new import restrictions or intensifying existing restrictions, members are to avoid "the point" at which such action involves "the complete exclusion of imports of any class of goods."

⁵ Members "whose economy has been disrupted by war" may until the end of 1951 depart from the general rule of nondiscrimination if such measures facilitate reconstruction and do not involve a "substantial departure" from the rule. Similar exceptions from the rule of nondiscrimination are permitted under certain other circumstances.

charter represents the best possible compromise. One can hardly take exception to the concessions accorded to the nations in need of rehabilitation and economic development. However, the intense concern over the threat of external depression has been met by a somewhat awkward arrangement. Member countries can apply for exemption from the general rule against quantitative controls when their endeavors to maintain or raise domestic levels of employment involve them in balance-of-payments difficulties. Should applications under this provision be persistent and widespread, the I.T.O.—in consultation and collaboration with the I.M.F.—will consider other measures for removing the underlying causes of the existing disequilibrium. This means that the I.T.O. will duplicate a major function of the I.M.F. Also, what nearly all countries fear is the future threat of external depression originating in a major trading nation, and especially in the United States. Sooner or later, such a calamity would affect most other countries and it would seem preferable, therefore, to provide for defense on a general rather than on an individual basis. This could be done most consistently by strengthening the contracyclical function of the I.M.F. and, particularly, by insuring—under a strengthened scarce-currency clause—the prompt authorization of foreign-exchange control once the depressed “scarce currency” country is unable or unwilling to increase by positive measures the general availability of its currency. If, in the absence of external depression, a country experiences persistent balance-of-payments difficulties because of the specific policies by which it maintains a high level of employment, it should obtain relief as afforded by the I.M.F. Orderly changes in the par value of currencies may be found less disturbing to world trading conditions than the use of quantitative trade restrictions. A program along such lines would seem less subject to abuse than a rather promiscuous resort to quantitative controls, and it would certainly be far less cumbersome administratively than the proposals included in the draft charter. Except for countries with a complete state monopoly over foreign trade, there is no compelling reason why membership in the I.M.F. should not be made mandatory for all members of the I.T.O. It is possible that such an integration of the functions of the I.M.F. and the I.T.O. will not prove feasible politically, but it seems worth while to explore fully the practicability of such a solution.

The main weakness of all international planning for expansive world commerce doubtless lies in the immense difficulty, if not impossibility, of international co-operation on positive and co-ordinated contracyclical policies. The undertaking that all countries will take action designed to achieve and maintain full employment through measures appropriate to their political and economic institutions, is no more

than the inconsequential recognition of a vague responsibility. In view of the vast differences, from country to country, in political and economic organization, of the controversial character of the theorizing on contracyclical policy, and of the jealousy with which the nation-states are guarding their sovereignty, it is patently absurd to advocate international agreements on full-fledged stabilization schemes. This dilemma, however, does not preclude the search for more effective undertakings designed to impede the international migration of depression once it has broken out in a major industrial country.

According to the tentative draft charter, member countries will pledge themselves, first, not to "export unemployment" in their endeavor to maintain or expand employment at home and, second, to make their "full contribution" to action designed to correct a persistent surplus in their balance of payments involving other nations in an equally persistent deficit. These commitments might be strengthened by requesting all member countries to report, within a reasonable time, the exact manner in which they propose to honor these pledges. Indeed, it would scarcely be amiss to instruct the I.T.O. or another agency of the Economic and Social Council to review the reports and, if deemed necessary, make recommendations toward improved programs.

In some quarters,⁶ it has been suggested to set up two types of international stabilization agencies, one engaged in large-scale contracyclical lending and the other in conducting buffer-stock operations in major raw-materials trades. Taking action out of the hands of national governments, such institutions, once established, would command the advantage of dependability. Both agencies would especially benefit the less industrialized and indebted countries which in the past were hit with particular severity by cyclical fluctuations in foreign lending and in raw-commodity prices. But moderating extreme fluctuations and maldistribution of international purchasing power, they would also benefit the industrialized and the creditor nations and would tend to lessen in all countries the incentive toward protectionism generated in crisis situations.

Unfortunately, there are very substantial obstacles in the way of creating such agencies now. The International Bank for Reconstruction and Development could be instructed unambiguously to consider contracyclical lending as part of its permanent tasks.⁷ Yet the Bank is

⁶ Jacob Viner, "Commercial Policy in the Post-War World," in Proceedings of the Norman Wait Harris Memorial Foundation, *The United Nations and the Organization of Peace and Security* (Chicago, 1945), p. 143; Jacob Viner, "International Finance in the Postwar World," *Lloyds Bank Review*, October, 1946; *Economic Stability in the Post-War World* (Geneva: League of Nations, 1945), pp. 265-271, 284-285; *Report of the Committee on Foreign Economic Relations* (New York: Twentieth Century Fund, 1946), pp. 17-22.

⁷ This would seem to require a modification of the Bank's charter.

committed to promote rehabilitation and this assignment brooks no delays for the sake of antidepression planning. Nor can all furtherance of developmental projects be subjected to such timing. There is, after all, no reason why backward countries should adapt all their development plans to the uncertain success or failure with which the advanced nations tackle the problem of the business cycle. The Bank's residual capacity would hardly seem large enough to sustain much more than negligible contracyclical operations, for it is exactly at times of depression that the Bank will find it difficult to encourage private lending and will have to rely increasingly on its own resources. What is needed are resources far more copious than the Bank now possesses.

To suggest the formation of international buffer stocks is to pose an array of intricate problems. Designed to abridge the wide range of price fluctuations engendered by cyclical instability in the raw-materials markets, the function of such an agency or agencies is entirely different from that of intergovernmental commodity arrangements formed to deal with the causes and effects of surplus production capacity. On the other hand, it would be impracticable to have two independent institutions operate in the same raw-material trade. Intergovernmental commodity controls may, of course, set up buffer stocks, and it is, indeed, scarcely conceivable that they will not if these controls are to assure the availability of supplies adequate at all times for world consumption requirements at reasonable prices. Whether such ancillary buffer stocks could actually be depended upon to pursue contracyclical purchasing and selling with success cannot be predicted before the constitution of future commodity agreements is more precisely known. Most likely, their buffer stocks would be large enough only to counteract such variability of supply as may be caused by faulty decisions on output and export restriction. In commodity trades unencumbered with the problem of redundant output facilities, it cannot be sanguinely assumed that buffer-stock operations will refrain from interfering with secular market trends and will not be abused in the interest of price-lifting manipulations. In the long run, their ability to lessen price fluctuations will be weakened in direct proportion to the degree with which such extraneous objectives are pursued. To be sure, a five-year moving average may be employed as a first approach toward projecting the long-run equilibrium price. No mechanical formula, however, can afford more than a first approach, and any amount of latitude granted to the buffer-stock management affords scope for price-rigging maneuvers. How to counteract this danger is a political and administrative problem of the first order. The establishment of buffer stocks, as the establishment of commodity agreements, also raises the problem of

how the operation of these institutions can be protected from disturbing changes in national policies on tariffs, quantitative restrictions, export and internal subsidies, and state trading.

Both projects—a contracyclical lending fund and international buffer stocks—are facing one obstacle seemingly insuperable at the present time. They require operating funds of a very large magnitude. Their establishment would make it necessary for governments to commit themselves to sizable financial contributions over the disposition of which they would retain only fractional control. Nevertheless, as ideas of intelligent international planning, these projects merit more than passing attention and study.

In the face of these limited opportunities for international stabilization schemes at the present time, it is perhaps worth while to explore such possible contributions as can be made by individual countries. The fear of undue cyclical fluctuations in the volume of world trade results largely from a fear of an inherently unstable United States economy. If the United States regards the realization of its world-trading program as being in its enlightened self-interest—and so it is—then this country might well consider special steps likely to bolster the acceptability and the success of its scheme. Much could be accomplished (1) by planning and preparing in advance a concrete minimum program designed to moderate and shorten an incipient American slump and (2) by devising concrete measures, also prepared in advance, for mitigating the world scarcity of dollars likely to result from an American depression. In pursuit of the second policy, machinery and funds might be set up for effective contracyclical lending, and the service schedule of American foreign loans might be made variable to permit intelligent adjustment to changing business conditions. Such policies would by no means involve American sacrifices in favor of foreigners. They should be pursued, regardless of the I.T.O., in the interest of the domestic employment situation.

IV

If a relatively liberal trading system is adopted, the United States will be its vital center. This position not only renders a reasonably stable United States economy a matter of international concern but also calls for an American foreign economic policy which is reasonably dependable. During the interwar period, the foreign economic policies of most countries became more and more inconstant and unpredictable and this was one of the factors undermining the old trading order. It is therefore desirable that all major trading nations stabilize their trade policies as well as their economies. That the United States do so is of first importance. This means that, regarding crucial matters, the United

States Government should be capable of settling on one policy in preference to two or three pursued simultaneously. In terms of American politics, a bipartisan approach to basic foreign economic policies seems to be highly desirable—perhaps even if bipartisanship should require a moderate compromise on the more liberal features of the American trade program.

Viewing the present plans for an I.T.O. in their entirety, one may ask whether the future world trading regime can ever become a universal order. According to Article 78 of the American suggested charter, the projected I.T.O. will become effective within sixty days after a minimum of twenty ratifications have been received. For the purpose of avoiding indefinite procrastination, this is a good provision. But it also admits of a trading system in force only over a section of the world. Since the benefits of membership in the I.T.O. may be denied to outsiders, the future I.T.O. may thus turn into something like a large trading bloc maintaining uncertain and unpredictable commercial relations with other blocs or countries. Such a development would offer certain advantages. It might facilitate a degree of collaboration, of unity of purpose, and of cohesiveness denied to a more comprehensive organization. If the United States and the countries of the British Commonwealth of Nations and of Western Europe join, such a combine would control by far the larger part of world trade. If existing political and ideological tensions should become aggravated, there may be no other alternative to a sectional trading regime than to have none at all.

Anything much less than a universal trade order, however, also suffers very serious shortcomings. The present range of controversy and disagreement shows that most obstacles to universal co-operation would also hamper attempts at setting up a sectional regime of freer trade. Indeed, to be enduring, a smaller grouping might require far closer collaboration than would be necessary for a comprehensive scheme. Since a liberal trading bloc could not do without extensive commercial dealings with the world outside, it might be hard to prevent defections; and there would be the constant danger, analogous to the operation of Gresham's Law, of bad trading practices driving out the good. Obviously, a world commercially divided might become one of intensified political antagonisms, with commercial blocs turning into political alliances. In that event, smaller nations could not afford to choose between rival groupings only on the basis of commercial predilections. Considerations of power would tend to become decisive. Under such circumstances, United States leadership of a liberal trading bloc would presuppose financial, political, and military commitments which, however desirable or necessary on other grounds, could scarcely be justified for the sake only of liberalizing a section of world trade.

DISCUSSION

PERCY W. BIDWELL: I think that first of all congratulations are in order for Dr. Wilcox and those who have collaborated with him in the various stages of drafting the charter for the I.T.O. If one stands off for a moment and looks at the job of setting up a set of rules for the regulation of international trade for some fifty-odd nations, it is indeed formidable. Among these nations you have the widest possible variations in the stages of their economic development and in economic institutions. Yet, in a commendable effort to get universality in membership, a document has been drawn up which takes into account all these differences. Such a document cannot be too rigid; its terms cannot be too precisely defined.

Dr. Knorr has called attention to several cases in which the new draft was *more flexible* than the earlier American edition. He regretted certain compromises on principle, particularly with respect to quantitative controls, but admitted that such compromises might be "compensated by increased flexibility, permitting adaptation to future trading conditions as yet unknown." He continued, "In several ways, moreover, the weakening of the proposed commercial code is compensated for by a strengthening of the I.T.O. itself." This, he warned, places a heavy strain on continuous international co-operation, particularly in view of the "growing diversity of national economic structures."

These remarks raise certain questions about the organization of the I.T.O. What are its powers? How are they exercised? How can it provide flexibility? If one analyzes the draft charter to find out just what the Organization is supposed to do, he will be amazed at the number and variety of its duties. The collection of information and the making of reports are obvious tasks of every organization, either national or international, which has to do with the regulation of business. The importance of these tasks is not to be disparaged. If the fact finding is well done and the results honestly presented, the effects in educating public opinion in the member countries may be substantial. Thus national policies may be brought into conformity with international purposes. Also, well documented studies are an essential basis for the policy-making functions of the executive board of the Organization.

The general investigatory and opinion-forming activities of the I.T.O., it seems to me, are best exemplified in Chapter VI of the draft charter, which deals with restrictive business practices. Here we have provided a carefully considered procedure by which the I.T.O. can call conferences, hear complaints of business practices which restrain competition, require information and make findings, and issue recommendations to member states of action which they should take. The Organization, it is provided, shall prepare and expeditiously publish reports on all complaints, showing fully the findings reached, the information on which such findings are based, and the action recommended. The members undertake to take the fullest account of these recommendations, to report action taken, and when no action is taken to explain to the Organization the reasons therefor.

The I.T.O. is not merely a fact-finding and advisory board. It has also quasi-judicial and administrative powers. It interprets the charter and issues rulings based on its interpretation. Article 86 (Section 2) provides that "any question or difference concerning the interpretation of this charter *or arising out of its operation* shall be referred to the executive board for a ruling thereon." The wide scope of action implied in the last phrase is worth noting. It might perhaps confer on the Organization the right to interpret the provisions of multilateral treaties negotiated in accordance with the provisions of the charter. The Board is not in all cases a final authority. In some cases appeal may be taken to the International Court of Justice.

In addition to the general power of interpreting the charter, the Organization is charged specifically with the duty of defining certain terms. For example, it can determine whether or not a price stabilizing payment constitutes an export subsidy. (Section E, Article 30, paragraph 3.) The Board also may give an opinion as to whether certain contemplated action on the part of a member is permissible under the terms of the charter, and may give approval in advance to a proposed course of action. This procedure is best illustrated in Article 26, which deals with restrictions on imports to safeguard the balance of payments, and provides that any member applying or intending to apply restrictions may consult with the Organization with a view to obtaining its previous approval. The action of the Organization will not be arbitrary but in accordance with criteria defined in the charter. Approval, having been given, confers immunity on the member against punitive or retaliatory action.

The key question about the I.T.O. in many people's minds is: what power has it to enforce its decisions? It is obvious that what the framers of the charter have in mind is a body with more than fact-finding or advisory powers. In general the Organization has the task of seeing to it that the member nations live up to their obligations. It interprets those obligations as defined in the charter, issues rulings, and hears complaints of noncompliance; it makes investigations, holds hearings, and issues decisions. Finally, the Organization has certain powers conferred upon it by the charter which are designed to bring pressure upon the member states to force them to comply with its recommendations and decisions. The methods of bringing pressure may be likened to ostracism in the Greek city states or excommunication in medieval times. The I.T.O. is a voluntary association of nations, each of which has undertaken to observe certain principles and to obey certain rules in the conduct of its commercial relations with other nations in consideration of reciprocal undertakings on their part. Should a member break his agreement, for example, fail to negotiate with other members for the reduction of tariffs or insist on maintaining quantitative restrictions or injurious export subsidies, the Organization after other procedures have failed may release other members from their obligations under the charter to the offending state. Released from the pledge of most-favored-nation treatment, any or all of them might then freely impose discriminatory duties on his trade, employ quantitative restrictions, or other weapons of

economic warfare whose use is restricted by the charter. The charter recognizes that all infractions of its rules are not equally important and that the cancellation of the most-favored-nation pledge might be out of proportion to the offense. Consequently, it gives the I.T.O. discretion to make the punishment fit the crime by limiting the scope of sanctions.

The frequent use of sanctions would, of course, destroy the purpose of the charter which is to get rid of discriminations and nontariff restrictions. So, if the Organization is to function successfully, it must rely principally upon the milder forms of control, upon publicity, or furnishing opportunities for consultation between offending and aggrieved nations, upon the publication of competent, objective studies of the effects on world trade and the trade of particular countries, on cartels, commodity agreements, preferential tariffs, and other matters of commercial policy. Whether these studies will be well planned and well executed will depend very largely on the personnel of the Organization's expert bodies, its three commissions, expert staff, and its secretariat.

There is danger in a discussion such as this making too much use of words and phrases expressing general principles and their qualifications, of exceptions, prohibitions, safeguarding, and escape clauses. These are necessary mechanisms, but still they are only mechanisms. They are inert. The force that will energize the new institution and the spirit which will animate the mechanisms so that they accomplish their purpose, must come from the men and women who work in the Organization, both on the expert and the policy making levels. The supply of well qualified people in this field is not large. You will all agree, I believe, that the tasks that confront the new I.T.O. will present a challenge to the very best qualities of heart and mind. All of us ought to use whatever influence we have to see that this important new institution is well staffed.

ALEXANDER GERSCHENKRON: I wish to express my general agreement with Dr. Knorr's well-balanced and realistic appraisal. In the following I should like first to touch on one point he has made, the merits of which are not clear to me, and then to add a few remarks in supplement rather than in criticism of his paper.

I think that Dr. Knorr has rightly devoted a good deal of his paper to the problem of contracyclical policies on the part of the international economic organizations. I agree particularly with his emphasis on the need for intensive studies in this field. I am less convinced, however, of the validity of a specific suggestion made by Dr. Knorr in this connection. He objects to the right granted by the I.T.O. charter to members to impose quantitative restrictions on trade when, as a result of their own domestic employment policies, their balance of payments is in disequilibrium; he feels particularly that such an arrangement would not be suitable in times of general depression; and he recommends the use of a reinforced scarce-currency clause of the Fund Agreement as a preferable alternative.

Dr. Knorr does not say precisely what he means by reinforcing the scarce-

currency clause. Does he mean, for instance, that the Fund should be given special rights of applying direct pressures on the country which is unwilling to utilize its surpluses—pressures of the type contemplated in the original Keynes Plan; or has he in mind a reinforcement of the clause by stipulating, for instance, that at any time when the Fund's holdings of a certain currency have fallen to a given, arbitrarily chosen, percentage of its quota, the Fund should be obliged to declare the currency in question scarce; or would he go so far as to give the member countries the right to declare the currency scarce, even though it may not as yet, as required in the scarce-currency clause, become evident to the Fund that the demand for such currency seriously threatens the Fund's ability to supply it.

Amendments along these lines, I submit, are either impracticable or inadvisable. They would greatly reduce the flexibility of the Fund's policies, or even tend to eliminate fully the Fund's guiding influence in the field. It should be noted that in its present form the scarce-currency provision is a rather radical instrument. Once the Fund has declared a currency scarce, the members regain, after consultations with the Fund, a very high degree of freedom to impose discriminatory exchange restrictions. It would not seem desirable to eliminate the requirement of previous consultations, as this is a very necessary method which would make it possible for the Fund to preserve some guidance over the future course of events.

Quantitative restrictions for maintenance of employment indeed are undesirable. For the time being, in default of co-ordinated international contra-cyclical policies they are an inevitable evil. This evil, however, has been greatly mitigated in the present draft of the I.T.O. charter in which the right of the member to apply such restrictions is qualified by stipulations concerning consultations with the I.T.O. (and, through the I.T.O., with the I.M.F.), as well as by the institution of a procedure regarding complaints and sanctions. This may not be sufficient to prevent what Dr. Knorr calls "promiscuous use of quantitative restrictions," and I should agree that it might have been better if approval by the I.T.O. were required prior to the imposition of restrictions. Still, the existing arrangement seems to be more desirable than an increased reliance on the scarce-currency provision.

Dr. Knorr gives three reasons for his preference for the scarce-currency instrument: (1) general depression, he says, requires a general rather than an individual defense, (2) in times of depression the provisions of the charter will become unduly cumbersome administratively, and (3) they involve duplication of policies by the I.T.O. and the I.M.F.

I feel the first argument should be approached with caution. In times of depression it becomes paramount to prevent the danger of a general disintegration of world trade; a general flight from international co-operation may end in a general defeat rather than in a general defense. In a depression it is particularly important to prevent the I.T.O. from losing contact with the commercial policies of the individual countries and the controls that are being applied. In addition, the I.T.O. charter provides, although somewhat gingerly, for consultations and discussions, in collaboration with the Fund, of measures

to be taken by countries whose balances of payments are favorable. This, at least in principle, is much more of a general defense than a situation where everyone tries to save himself.

Nor do I feel that the argument that quantitative restrictions as envisaged in the charter would prove unduly cumbersome administratively is necessarily convincing. The task of international control of trade barriers is indeed an infinitely complex and cumbersome one. The solution, it seems to me, lies in recognition of this fact and in providing the I.T.O. with an adequate staff so as to make it equal to the job. Otherwise the charter may easily suffer the fate of the well-meant, but futile, initiatives of the interwar period. It may be recalled in this connection that the numerical inadequacy of the League of Nations' economic organization proved a very serious impediment in its work. Dr. Knorr rightly stressed the great need for flexibility. But flexibility in this field cannot be achieved by reliance on general devices. What will be required is painstaking and effective concern with individual measures of trade control.

Finally, it is not clear to me that the present draft of the charter should lead to serious apprehensions concerning duplication of action by the Fund and the I.T.O. It seems that considerable care has been taken to assure, as far as possible, identical membership in both organizations, at least as a rule. In exceptional cases where membership in the I.T.O. will not coincide with membership in the Fund, special exchange agreements with the I.T.O. in collaboration with the Fund will be required. The fact that both organizations will find a broad field for co-operation is far from being disturbing. Co-ordination between monetary and commercial policies is extremely desirable and indeed essential from the point of view of the general purposes of both organizations, and the I.T.O. certainly is entitled to watch over commercial aspects of balance-of-payments problems.

What does give rise to apprehensions is not duplication, which in reality is very necessary co-operation and co-ordination, but the fact that divergent voting systems may possibly be adopted in the two organizations; that is to say, weighted voting in the Fund, and equal vote in the I.T.O. This might lead to substantial differences in approach and attitude and may, indeed, create real problems.

I should like finally to refer briefly to a specific problem in connection with intergovernmental commodity agreements, which both Dr. Wilcox and Dr. Knorr discussed. I am referring to commodity agreements on grains and, more specifically, on wheat. I feel that a strategic factor in this respect is the future of agricultural production in industrial and semi-industrial Europe.

A great deal is being said now in the capitals of Western Europe about an increase of efficiency in farming and a return to competitive conditions. But behind this silken curtain of words and plans lies the fact that no serious attempt is being made to prevent preservation or re-creation of agricultural high-cost areas within the framework of the world economy. It will be remembered that in the past agricultural protectionism, and more specifically

protection of grains, was the source and origin of autarchic ideologies and policies, and one of the greatest stumbling blocks in the path of freer trade. In the past, international commodity agreement in this field could have been nothing other than a conspiracy for joint exploitation of consumers. This was true for the simple reason that the grain importing countries in reality represented the interests of their high-cost producers rather than those of consumers. As Mr. Wilcox pointed out, the present charter assures equal voice to consuming and producing countries. But as long as the so-called "consuming" countries have not carried out considerable structural adjustments, as long as the volume of their agricultural production remains inflated, and within this inflated volume strong emphasis is placed on production of grains rather than converted products, the chances for success of commodity agreements will be slim indeed.

These chances would be greatly enhanced if it should prove possible, first, to achieve substantial reductions of European grain tariffs under Article 24 of the charter and, second, to allow a sufficient time for these reductions to affect the agricultural structure in Europe. If a commodity agreement on wheat should come too early, the probability would be that it would impede rather than promote this process. I appreciate that the charter stipulates that commodity agreements should be designed to shift production toward low-cost areas. But for the reasons given I have grave doubts that a commodity agreement on wheat could prove an effective vehicle of adjustment.

DOMESTIC VERSUS INTERNATIONAL ECONOMIC EQUILIBRIUM

MULTILATERAL TRADE AND EMPLOYMENT

By ARTHUR SMITHIES
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The emphasis placed on employment in the charter of the United Nations and the draft charter of the International Trade Organization¹ arouses both optimism and pessimism. It indicates that the world has recognized that perhaps the major cause of world instability is depressions that originate in large industrial countries and spread to the rest of the world. But it also indicates that many countries may not be prepared to make short-run sacrifices in terms of employment for the sake of a longer-run international stability.

The charter of the U.N. proclaims that one of the objectives of the organization is to promote full employment. The draft charter of the I.T.O. states that "the avoidance of unemployment or underemployment . . . is a necessary condition for the expansion of international trade and, in general, for the realization of the purposes of the Organization."

Almost as a voice from a forgotten past, we also find lurking in the background the converse proposition—that measures to expand international trade on a balanced basis will expand domestic employment. One of the purposes of the International Monetary Fund is "to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment." Curiously enough, there is no equally clear statement to this effect in the draft I.T.O. charter.

These are the first two questions I want to discuss—the dependence of multilateral trade on sustained high employment and the contribution of multilateral trade to employment. The third relates to foreign investment. The Articles of Agreement of the International Bank are strangely silent on the point, but the I.T.O. document asserts that "the industrial and general economic development of all countries and in particular of those countries whose resources are as yet relatively undeveloped will improve opportunities for employment. . . ." There can be little doubt that foreign investment will increase employment in the lending country or the borrowing country, or both. The question I am here concerned with is its relation to multilateral trade.

¹ *Charter for an International Trade Organization* (Department of State, December, 1946).

I. The Dependence of Multilateral Trade on Sustained Employment

The final acts of Bretton Woods, the United Nations charter, and the draft I.T.O. charter all contain pledges by the participating countries to maintain levels of employment varying between "high" and "full." The knight in shining armor has been Australia, and the United States has consistently played the part of reluctant dragon. The reason for this is not hard to find. Australia is the most articulate of the "dependent economies" whose national prosperity depend heavily on foreign trade, while the United States is the country where other countries confidently expect that the next world depression will originate.

At first sight, the pledges and the discussion that has led to them sound either naïve or impertinent. They are naïve when they seem to imply that there is nothing that the United States wants more than a big depression. They seem impertinently to suggest that the United States has not read the modern literature on the theory of employment and needs to be informed of its contents by an international document.

I believe, however, that the purpose of the pledges is not to instruct the United States on how to mend its ways but to provide other countries with an escape from the agreements.

There is no need to argue that multilateral trade will flourish most luxuriantly in a world of stable and prosperous economies. That is the condition under which the classical system is a demonstrable success. The important thing to discuss is whether agreements to conduct trade on a multilateral basis can be preserved in the face of serious depressions, particularly in the great industrial countries.

Suppose balances of payments throughout the world are in equilibrium under generally prosperous conditions. To simplify the discussion, suppose there is no foreign investment and that imports of every country depend uniquely on its money national income. Is it possible under these favorable assumptions that, with the same exchange rates, balances of payments could be in equilibrium under conditions of world depression?

Of course equilibrium could come about by sheer accident. But can governments adopt systematic and definable policies that will produce it? This could be done if every country whose exports suffered, arranged that at any level of national income the marginal propensity of its government to spend plus its marginal propensity to invest privately were equal to its marginal propensity to tax plus its marginal propensity to save. In these conditions, every decline in a country's export income would produce a corresponding decline in national income, and national income would decline sufficiently to decrease imports by an amount equal to the decrease in exports.

If this policy were generally followed, the depression would be more severe in some countries than others. For instance, countries whose main industry was entertaining tourists or countries that supplied raw materials would have to reduce their national incomes severely. It is entirely possible that the depression would be more severe in the countries to which it spread than in those in which it originated. It is indeed unlikely that international equilibrium could be preserved if national incomes merely declined in step.

The policy I have outlined is essentially the old gold standard prescription adapted to modern conditions where the government's fiscal policy exerts a major influence on the national income. It means that the government's fiscal policy, as well as its monetary policy, should encourage and not offset the decline in national income induced by loss of exports.

Probably no government in the world today would agree to do that, and most of them would take domestic measures to preserve prosperity at home in the face of world depression. In that event, balance-of-payment difficulties would unquestionably occur. No country has yet had the temerity to suggest that domestic recovery policies should be synchronized by an international agency, and the presumption is that no country would agree that they should be. Political, economic, and social conditions will make for different rates of recovery that bear little relation to the requirements of international economic harmony.

Furthermore, no matter what policies are followed, imports and exports will not decline simultaneously. If a country suffers a loss of export income, its demand for imports will only decline with a lag, and in the meantime foreign exchange reserves are depleted.

Nothing more need be said to show that balance-of-payments difficulties are inherent in any serious depression. This is demonstrated in the draft charter of the I.T.O. which recognizes that countries are entitled "to safeguard their economies against deflationary pressure in the event of a serious or abrupt decline in the effective demand of other countries."

These difficulties can be dealt with mainly: (1) by plugging the gaps with credits; (2) by adjusting exchange rates; (3) by resorting to direct controls over imports. From the point of view of preserving multilateral trade 1 and 2 are preferable to 3.

1. The ideal arrangement would probably be to keep exchange rates stable and to permit deficit countries to borrow from an international agency. But the International Monetary Fund is not equipped for the task in the event of a severe depression. Its total resources are not large enough and countries are not permitted to draw enough at any one time. The credit facilities of the Fund are intended to smooth out minor

fluctuations; they are not adequate to correct major disturbances in trade.

But would a country be willing to forego import restrictions and finance its balance-of-payments deficit by borrowing or allow its reserves to sink to a low level? Such policy would impose a future debt burden on a country and its domestic recovery efforts would have to be shared to some extent with other countries. It would require far-sighted statesmanship and sometimes a good deal of optimism to assume that the bread cast on the waters might eventually come back in the form of demand for exports.

2. During the thirties exchange rate adjustments became unfashionable. It was frequently found that when a country depreciated to correct a balance-of-payments deficit, the deficit increased owing to a speculative outward flow of capital. But many countries now have controls over capital movements and they are encouraged by the Fund to retain them. If these controls are strict enough, exchange rate changes could become a far more effective instrument of adjustment.

Whether or not exchange rate adjustments will be used in the future depends on the policies of the Fund. Under the Articles of Agreement, exchange rate changes are to be made only at the request of the member concerned and to correct a "fundamental disequilibrium," which is nowhere defined. Readers of the Fund document who are unschooled in its folklore inevitably get the impression that the Fund is intended to retard rather than encourage exchange rate changes. Among its purposes are "to preserve exchange stability" and "to avoid competitive exchange depreciation." If this language can be construed to mean "to facilitate necessary or desirable changes in rates," well and good.

I believe that the history of exchange rates indicates that countries have depreciated too late more often than too soon. France and England are obvious examples. The one exception that immediately comes to mind is the United States in 1933. Since the war, there has been a disturbing tendency for countries to allow their currencies to remain overvalued for the sake of keeping their terms of trade favorable.

Exchange rate changes, under international control, have untried possibilities as an adjusting device. The future of multilateral trade may well depend on the imagination and foresight with which they are used.

3. By far the most popular method of correcting balance-of-payments difficulties is quantitative restrictions. Countries at Bretton Woods were willing to surrender the right to use exchange controls on current transactions after the transition period. But they regard direct import controls as indispensable. Keynes hailed these controls as a new discovery that will help us apply to the modern world the wisdom

of Adam Smith.² To advocates of multilateral trade in this country, they are the devil incarnate.

Clearly import controls through quotas seriously endanger multilateral trade. More than any other type of control, except exchange controls, they are discriminatory—despite all the safeguards—and they are completely protective. Imports are permitted if they pay the tariff but there is no room for argument with the quota. Consequently the countries that fear balance-of-payments trouble and those that want to protect young industry insist on retaining the right to use quotas. The United States, on the other hand, insists on minimizing their use. The draft I.T.O. charter permits the use of quotas for balance-of-payments purposes and to promote industrialization, but they must be applied under the watchful eye of the organization.

It is significant that the draft charter provides for full consultation with the Fund when the I.T.O. is considering the use of direct controls by individual members. One suspects in the draft the wistful hope that the Fund might remove the need for quotas by promoting exchange rates adjustments. One significant paragraph states:

If there is persistent and widespread application of quantitative restrictions [for balance-of-payments purposes], indicating the existence of a general disequilibrium which is restricting international trade, the Organization shall seek consultation with the International Monetary Fund. The Organization may then in collaboration throughout with the International Monetary Fund initiate discussions to consider whether other measures might not be taken, either by those countries whose balances of payments are under pressure or by those countries whose balances of payments are tending to be exceptionally favorable.

If such a conference is to be a success, it is difficult to see how it could fail to recommend a thoroughgoing revision of exchange rates that would permit international equilibrium without excessive use of import controls.

Theoretically the I.T.O. charter could withstand a deep depression. Import controls would be used when required, but when the world returned to prosperity they would be dropped and multilateral trade would be resumed on an unimpeded basis. It would be unwarranted optimism to make this assumption. There is danger that the whole structure will collapse if the whole burden of adjustment is thrown on import controls and if countries seize the excuse afforded by a depression to embark on protective and restrictive policies.

While there are compelling reasons why we need not fear a collapse of the order of that of the thirties, there is no warrant for the belief that we have embarked on a stable era of world prosperity. Even without depression there will be change, and change requires adjustment.

² "The Balance of Payments of the United States," *Economic Journal*, June, 1946, pp. 172-187.

The future of multilateral trade depends ultimately on whether the countries of the world believe that its long-run advantages will transcend short-run appeals to abandon it. If countries are willing to use their reserves and make prompt changes in their exchange rates, direct controls can be held to a minimum and there is hope. But if countries take a cynical view of the long run, or if they are unwilling to let their own recovery efforts benefit any other country, the splendid efforts that are now being made to restore the principles of rational conduct to the world economy will be wasted.

II: *Will Multilateral Trade Increase Employment?*

I come now to the question whether removal of trade barriers can be expected to increase employment. If every country agrees to import more and consequently to export more so that the total volume of international trade increases, will money national incomes and consequently employment increase?

The answer depends on the effect of removal of trade barriers on domestic conditions within the various countries. In an extreme case, removal of barriers could merely mean that every country substituted consumption of foreign goods for its own goods and incomes and employment remained unchanged. But this process of substitution will have some effect on the propensity to consume and the propensity to invest in every country. Will these effects make for a higher national income?

On the consumption side, the argument is as old as Malthus. In Book V of the *Principles* he argues in effect that removal of obstacles to domestic trade will increase the variety of goods available and so increase their rates of consumption. Removal of barriers to international trade may have the same effect. We saw during the war how the absence of particular kinds of goods, such as automobiles, diminished consumption in relation to income. In the same way new opportunities to consume exotic goods and to travel may increase the propensity to consume in any country. The removal of trade barriers will reduce monopoly, and thus tend to redistribute income more equally. This, also, will tend to increase the propensity to consume.

On the other hand, multilateral trade means that many goods are available at lower costs and real income is consequently increased. This would tend to lower consumption and increase saving in relation to income.

On the investment side, also, there are conflicting influences.

Domestic producers who enjoyed the shelter of protection will be exposed to international competition. This may increase investment of businesses having to invest in new equipment and adopt new tech-

nologies in order to survive. On the other hand, lower profits in the industries that were formerly protected may reduce the rate of investment.

I know of no statistical method by which conclusions can be reached on these matters, and a priori methods yield conflicting results with respect both to investment and consumption. From a practical point of view, the only satisfactory course seems to be to assume that relaxation of trade barriers will be, in the long run, neutral in its effects on employment. There are abundant arguments for freer trade from the real income point of view, and it is a mistake to weaken a strong argument by supporting it with claims of dubious validity. Let us hope that we have not reach the point where no economic policy can be justified unless it increases employment.

III. *Foreign Investment and Multilateral Trade*

My third question is whether the use of foreign investment as an employment policy should be limited on the grounds that sooner or later it disrupts multilateral trade.

Of course foreign investment that results from efforts by a country either to restrict its imports or to expand its exports, in competition with the products of other countries, will be disruptive. Such efforts mean that unemployment is exported, and unless the expansion of exports is achieved through "fair" competition—and perhaps even then—will provoke retaliation.

I am concerned here rather with productive investment abroad which increases demand for capital equipment and creates new demands, thereby increasing the total demand for goods and services. Such investment not only provides a market for capital goods produced in the lending country, or elsewhere, but makes possible domestic investment and expansion in the borrowing country. It can safely be assumed that employment in both countries will increase.

It is seriously urged, however, that foreign investment will store up balance-of-payments difficulties in the future. Let us consider these arguments.

The first is that foreign investment is an unstable item in balances of payments and is likely to dry up at the first hint of world depression. This was undoubtedly true in the late twenties, when world depression was accelerated by the cessation of investment abroad by the United States. Foreign investment shrank probably both because the supply of funds for investment contracted as the national income shrank and because the rest of the world became a less attractive place to invest in. If the rest of the world remained prosperous while the United States suffered a depression the picture might be very different. If foreign investment were safe enough it is possible that it might increase rather

than decrease as domestic investment opportunities shrank in the United States.

In any event, foreign investment in the forties and fifties will be very much more under the control of governments than in the twenties. The International Bank has been set up to encourage a stable flow of private international investment. Governments will, if anything, be under pressure to increase rather than to contract foreign investment in times of depression. Thus, I believe the prospect for stability in the flow of foreign investment is considerably greater now than in the twenties.

The second argument against foreign investment is that service charges on foreign borrowings are an inflexible element in balances of payments. In the event of depression, countries either have to default or accomplish a drastic reduction of their commodity imports. In Australia, for instance, overseas debt service in the worst year of the depression amounted to about half its export income. It is not surprising that after that experience Australia determined never again to borrow abroad.

This argument is a serious one and can only be avoided by altering the nature of loan contracts. Fortunately steps have already been taken to accomplish this. The Articles of Agreement of the International Bank provide that in the event of balance-of-payments difficulties a country can pay service charges in its local currency for a period of three years and then make long-term arrangements to convert those payments into the currency in which they are due. The British Loan Agreement provides for a waiver of interest in years where exchange and foreign reserve conditions make payment difficult. If this practice becomes general in loan contracts by governments or international organizations, one of the most serious objections to foreign investment will be met. But it is difficult to see how private investment that is not guaranteed by a public body can adopt this device. Unfortunately the world has not yet become enlightened enough to make investments in equity securities of foreign governments. The ideal arrangement would be one in which service charges of all international indebtedness fluctuated with the debtor countries' national incomes and balances of payments.

The third objection to foreign investment, from the point of multilateral trade, is that when the investment period ends and the repayment period begins, it will be extremely difficult to readjust balances of payments. This argument is applied particularly to the United States. It is feared that this country would never permit an import surplus sufficient to allow for a large item of repayment in its balances of payments. It is also argued that unless investment projects are designed to increase the export surpluses of the borrowing countries, those countries may not be able to repay after they have ceased to borrow.

It is obviously impossible to apply this latter criterion specifically to any particular investment project. The most it can do is to furnish a negative guide. A project may be rejected on the ground that there is no likelihood that it will contribute to capacity to repay. But it is impossible to forecast the United States balance of payments a generation hence. In a rapidly changing world, unforeseen influences may alter the whole complexion of the problem. On the basis of ignorance of other factors, it is not legitimate to assume that the situation will be changed only by the known factor. If a policy is worth while in the light of the foreseeable future, it should not be rejected solely because the remoter future is unknown. Who could have foreseen the future of the British balance of payments during the heyday of British foreign investment? Keynes never wrote wiser words than his last: "We shall run more risk of jeopardizing the future if we are influenced by indefinite fears based on trying to look ahead further than anyone can see."³

The fourth argument against foreign investment is the neo-Marxian contention that the struggle of capitalistic countries to preserve full employment through foreign investment will ultimately lead to conflict, and in the meantime will lead to disruption of the world economy. However inadequate the Marxian theory as a complete explanation of imperialism, this particular argument cannot be rejected with a shrug of the shoulders. Things could work out in the way the Marxians predict. Countries could seek to cure their unemployment problems by external measures. If foreign investment policies are based on the employment requirements of the lenders rather than on the productive needs of the borrowers, economic warfare and the destruction of multilateral trade could be the result.

Prime responsibility rests on the great industrial countries to achieve reasonable stability of income and employment, and this must be done by domestic measures. The draft I.T.O. charter states in effect that effective demand and employment of necessity depend on domestic measures. It should say in addition that the requirements of an expanding and prosperous world trade demand that domestic rather than international measures be used to keep up employment.

But international policy must not assume that economic stability will be unmarred by depression. Nor should it be assumed that multilateral trade is inevitably doomed if depressions do occur. If countries take this fatalistic view, the new instruments of control which can be used to further long-run objectives will plunge the world again into nationalistic chaos.

³ *Op. cit.*, p. 187.

INTERNATIONAL MONETARY POLICY AND THE SEARCH FOR ECONOMIC STABILITY¹

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I

The object of this paper is to consider the international implications of national policies aimed at maintaining high and stable levels of employment. It is now widely realized that such policies are not only compatible with, but actually prerequisite to, a large and steady flow of world trade. Substantial progress has been made since the end of the war in setting up the framework for a new international system of monetary and trading relations. The two Bretton Woods institutions are ready to start operations; and a conference just concluded in London has produced a draft charter for an International Trade Organization. This is a good time to inquire how this new system can be operated so as to agree rather than conflict with the domestic objective of stability at full employment.

The search for domestic stability at full employment must nowadays be accepted as a datum. The international monetary system should be—and, I believe, is now—so devised that the balance of international payments can never force a country into a state of deflation or inflation. Foreign trade fluctuations may continually necessitate *relative* shifts in the structure of prices and production, but should not compel any country to depart from the *general* norm of domestic stability. On occasion, domestic stability may of course break down; inflation or deflation may occur; but, if so, it will be for autonomous internal reasons, not as a means of bringing a country's external accounts into balance. Historically, resistance to deflation as a means of adjustment was not the only factor that led to the collapse of the gold standard. Resistance to inflation on the part of surplus countries—countries such as the United States, France, and Sweden at certain times in the interwar period—was perhaps just as important.

The problem that arises under these conditions may be stated as that of harmonizing the requirements of internal equilibrium with those of external equilibrium. It will suffice in this context to define "internal equilibrium," very roughly, as the maximum level of national income

¹For helpful discussion and advice in the preparation of this paper, I am greatly indebted to the members of the Monetary Policy Seminar at the Institute for Advanced Study, Princeton, New Jersey, and to Professor James W. Angell, Columbia University, New York.

and employment that can be continuously sustained without an inflationary rise in wages and prices; while "external equilibrium" is simply a balance of payments that maintains itself in equilibrium without the persistent use of monetary stopgaps such as gold movements or short-term borrowing, and without a permanent increase in trade barriers.

Responsibility for internal equilibrium—for the maintenance of a high and stable level of employment—lies primarily in the sphere of domestic policy. There may be limits to what a country can do alone, but there is always something it can do to keep its own house in order. This need for self-reliance is the first point to stress, and it applies to the prevention of deflation as well as to that of inflation.

The next point is that, in principle, a country striving for internal equilibrium need never be deterred by difficulties in its balance of payments. There exist specific methods of influencing the external balance so as to keep it in equilibrium. (We shall discuss them presently under the two broad headings of commercial policy and exchange-rate adjustments.) For a single country, consequently, a unilateral expansion policy even at a time of general depression should be not only desirable but also to some extent practicable, in much the same way as a unilateral free trade policy was shown to be by the classical doctrine of foreign trade. The means available for preserving external equilibrium should afford each country some scope for the pursuit of internal equilibrium independently.

Naturally it would be better to find a way of co-ordinating the domestic stabilization policies of at least the major trading nations. But, in the first place, such policies must exist before they can be co-ordinated. Secondly, even if they existed everywhere, they would probably not be equally effective in the different countries. Thirdly, this co-ordination may require a degree of supernational control quite impracticable in the present state of the world. Co-ordination may come about ultimately as a result of the spontaneous adoption and attainment by like-minded nations of the same goal of internal equilibrium. We can hardly hope for more than the kind of spontaneous development that characterized the rise of the gold standard system, in which exchange stability was the primary common aim.

In the meantime, the international monetary system must be so designed as to provide "buffers" in order to prevent such departures from domestic stability as may occur in individual countries from upsetting the internal equilibrium of other members of the system. It must ensure that any single country pursuing the goal of internal equilibrium has instruments at its disposal for maintaining external equilibrium at the same time.

II

Among these instruments, consideration must be given not only to exchange-rate adjustments but also to trade restrictions, whether enforced by customs duties, exchange controls or otherwise. A country expanding unilaterally at a time of world depression is likely to incur a deficit in its balance of payments. When its liquid monetary reserves are inadequate to meet the deficit, there is generally some change in the exchange rate that will restore external equilibrium. Alternatively, there is the possibility of adopting import restrictions, not in order to reduce imports, but just enough to prevent them from increasing. This will prevent the expansion from "spilling over" abroad, but will not actually hurt the outside world.

A country enjoying internal equilibrium may suffer a deficit in its foreign accounts because of a depression occurring in its export markets. For the depressed countries abroad, this means a surplus, which will give them automatically some relief from their depression. But an export surplus is an unneighborly way of relieving a depression which could and should be remedied by domestic measures. Here again, therefore, a policy of exchange adjustment, or import restriction adopted by a country with a deficit in its balance of payments for the purpose of closing that deficit, cannot be regarded as inflicting any unfair injury to the internal equilibrium of other countries.

This leads us to a basic distinction which has to be made between the defensive and the aggressive use of measures such as import restrictions and exchange depreciation. The line between defense and aggression may be hazy in international politics, but it is fairly clear in international monetary policy. There is a simple criterion; namely, the balance of payments; more exactly, the balance of all current transactions and productive capital movements, excluding for obvious reasons gold movements, short-term funds, and hot money flights.² Exchange adjustments and import restrictions are defensive when they seek to prevent or to remove a deficit in the balance of payments; that is, when they are needed for external equilibrium. They are aggressive when they aim at creating a surplus in the balance of payments. The draft agreement of the I.T.O. is in accord with this criterion. It permits the use of import restrictions, including even quotas, when they are required for the protection of a country's balance of payments. In the case of exchange adjustments, the regulations of the International Monetary Fund concerning "fundamental disequilibrium" are not so explicit. But it seems to me that the term fundamental disequilibrium must be defined pri-

² I have discussed the balance of payments as a criterion of international monetary policy in *Conditions of International Monetary Equilibrium* (Princeton University, Essays in International Finance, No. 4, 1945), pp. 4-8.

marily with reference to the balance of payments, especially since any persistent disequilibrium in the balance of international payments is bound to impair the Fund's own position.

A single country at a time of world depression could conceivably attain a full recovery at home solely by an "aggressive" policy of exchange depreciation or import restriction, creating a surplus in its balance of payments, with the attendant favorable multiplier effects throughout the domestic economy. This it could do only, of course, at the cost of worsening the position in other countries. The balance-of-payments criterion would exclude any such beggar-my-neighbor policy. It would permit, however, exchange depreciation and import restrictions in their defensive uses, when they may be legitimate means of safeguarding a country's domestic stability as well as its external equilibrium.

III

As a method of influencing the balance of payments, trade barriers can be treated, and are here treated, as one form of international monetary policy. For the maintenance of external and internal equilibrium in the general sense indicated, exchange adjustments and import restrictions stand on the same footing. But their effects on the international division of labor are very different. Some advocates of full employment seem to welcome the restrictive effect of commercial policy on international trade, for the sake of domestic employment. This attitude is based on two distinct grounds. First, there is the argument in favor of minimizing the volume of foreign trade so as to minimize the possibility of foreign disturbances upsetting the domestic employment situation. This view must be rejected, for it should be realized that the effects of foreign business fluctuations can be offset or neutralized by other methods, without giving up the benefits of international trade. The second argument amounts to saying that the employment problem would be easier to solve if we made ourselves poorer all round by putting an end to international specialization. There is some substance in this argument. The international division of labor is a laborsaving device. Destroying it, just like destroying laborsaving machinery, may create jobs. But full employment achieved in this way can never be considered a true equilibrium position. It is senseless to cure unemployment by reducing the level of economic efficiency. There are other ways of solving the employment problem.

Trade restrictions operating through import quotas or exchange controls may be inevitable when there is a deficit in the balance of payments, when gold and other monetary reserves are inadequate, and when a change in exchange rates would be too slow a remedy.

When exports fall off as a result of a depression abroad, or when imports increase as a result of domestic expansion toward the "internal equilibrium" level, protection of the balance of payments implies something more fundamental as well; namely, protection of the domestic employment situation. It is therefore right and proper that the new system of international trade and currency should have made provision for import restrictions through the quotas permitted under the I.T.O. charter and through the exchange controls envisaged under the scarce-currency clause of the International Monetary Fund, when such restrictions are required for international monetary equilibrium. But commercial policy in this broad "monetary" function should always be subject to three general rules designed to minimize its restrictive effect on international trade.

In the first place, when import restrictions are imposed to close a deficit in the balance of payments (a deficit resulting, say, from a depression abroad), they should subsequently be removed as soon as the balance begins to show a surplus (as the depression abroad gives way to recovery). This rule is expressly stated in the I.T.O. provisions adopted at the recent London conference. The surplus that might later appear could be removed by other methods, such as exchange appreciation or foreign investment; but the only proper way to remove it is by abolishing the import restrictions adopted previously. Our aim is not simply external equilibrium; it is external equilibrium with at least the pre-existing degree of international division of labor. Now as a matter of practical politics, the international division of labor is usually not something that one can put in cold storage during a depression and take out again in better times. In practice, vested interests are liable to grow up and prevent the subsequent removal of the restrictions. Yet there is some hope that the rule laid down by the I.T.O. could be made effective. The growth of vested interests might be discouraged by the very fact that the I.T.O. charter requires the restrictions to be removed when they are no longer needed for the adjustment of the balance of payments.

The second rule should be this: import restrictions that seem to be needed more or less permanently for protecting the balance of payments should always, in principle, be removed simply by replacing them by an appropriate change in the exchange rate. There must normally be some rate of exchange at which a country's foreign receipts and payments will balance without the use of import barriers for this general purpose of external monetary equilibrium.

Thirdly, the International Trade Organization should see to it that commercial policy for the maintenance of external equilibrium should, as far as possible, take the form of reducing import barriers in surplus

countries instead of increasing them in deficit countries. One country's balance-of-payments deficit is another country's surplus. And for the surplus country to reduce its own import barriers cannot be any worse than to have its exports subjected to higher barriers imposed by the deficit countries. Particular industries would be differently affected by the two alternative policies. But for the employment situation as a whole, one is as good or as bad as the other, while for international trade, one is much better than the other. Any unfavorable effect on employment in the surplus country, resulting equally from reduced import barriers at home or from increased barriers abroad, could be offset by domestic measures.

This point arises, for example, in the case of the scarce-currency clause of the Fund. Member countries would be permitted under this clause to impose discriminatory restrictions against the exports of a country whose foreign balance shows a surplus and whose currency therefore becomes scarce in the Fund. The surplus may be due to a slump in that country, and the restrictions would be justifiable as a means of safeguarding domestic stability in the deficit countries. But instead of allowing these countries to impose discriminatory trade restrictions, why not get the surplus country to lower its import barriers? Incidentally, while the former alternative represents a discriminatory trade policy, the latter does not imply any discrimination except in the sense that import barriers are reduced only by one country; namely, the surplus country.

IV

Thus there exist possible ways of mitigating the restrictive effects of the commercial-policy method of securing international equilibrium. Yet the method of exchange-rate adjustment is in general far preferable. The only trouble is that this method may not always be sufficiently effective in the short run. In the long run, a system of exchange rates should be established ideally in such a way that, when the domestic economies of the member countries are functioning at satisfactory levels of activity, each country's balance of payments maintains itself in equilibrium. There is in my view no good reason to doubt the general efficacy of exchange adjustments in righting a country's balance in the long run. It may conceivably happen that no degree of devaluation or appreciation will bring the external accounts into equilibrium. But this can be true only under rather exceptional conditions of demand and supply elasticity, which are unlikely to persist for a long time. It may be true in some countries today, but the present postwar conditions are exceptional and, we may hope, temporary. Our discussion here is mainly concerned with the working of monetary relations

under the more normal conditions we hope to reach after the period of immediate postwar reconstruction.

The object of the International Monetary Fund is to keep exchange rates stable in the short run but to permit step-by-step adjustments of rates from time to time, as and when the trend of international payments requires it. The method of exchange adjustment can under the new system be used in a way entirely compatible with the objectives of internal as well as external equilibrium. The Fund, we may note, has now explicitly recognized the domestic employment situation as one of the criteria to be taken into account.³ A true equilibrium rate of exchange is one that maintains the balance of payments, not simply in equilibrium, but in equilibrium at a satisfactory level of domestic employment.⁴

Some liberal-minded economists are so impressed with the restrictive dangers of commercial policy that they would rather leave the maintenance of external equilibrium entirely to the care of fluctuations in exchange rates. This view may be attractive theoretically, but it places too much reliance on exchange-rate variations. Owing to the speculative tendencies which they provoke in commodity as well as capital flows, such variations are likely to be disruptive of internal stability. Experience has shown that the distinction between exchange stability and domestic stability may become quite unreal when exchange rates are left free to fluctuate under the influence of speculative anticipations creating excessive and "nonfunctional" disturbances, not only in foreign trade, but also in domestic prices and production. This, at any rate, is apt to be the case when exchange variations are uncontrolled. When they are controlled by some form of official "pegging," then we have before us a quite different method—one which aims at offsetting, instead of correcting, discrepancies in the external accounts by means of gold or other liquid reserves.

V

The use of liquid external reserves as a buffer for temporary discrepancies in the balance of payments should be the normal method of operation of the international monetary system from day to day, or rather from year to year, exchange rates being thus held stable in the short run. That is the general function of what we may call "international liquidity," including in this term not only gold and exchange

³The resolution adopted to this effect is reported in the *Federal Reserve Bulletin*, February, 1947, p. 128.

⁴This idea is clearly implied in the section on Exchange Rates in the *First Annual Report of the International Monetary Fund*, which speaks of "the maintenance of a balanced international payments position at a high level of domestic economic activity." (See *Federal Reserve Bulletin*, October, 1946, p. 1130.)

reserves but also the drawing facilities (quotas) provided by the Fund.

International liquidity is a buffer, not merely in regard to the balance of external payments, but also in regard to internal economic stability since it makes it possible for a given country to offset, within limits, the effects of foreign business fluctuations upon the domestic economy. Suppose a country is striving to keep up both external and internal equilibrium, but suddenly finds itself faced with a depression in its export markets abroad. Exports fall off, and the export industries will suffer a depression which, through the familiar multiplier mechanism, may spread to the whole domestic economy. To preserve the general stability of the domestic economy in these circumstances, it is necessary to offset the fall in foreign expenditure on the country's products by an increase in the volume of domestic expenditure. This offsetting policy has its limitations in practice;⁵ but insofar as total employment depends on total outlay, the compensatory increase in domestic demand will tend to prevent a general depression in the given country. The principle of compensatory domestic spending can and should be applied in reverse when foreign demand is excessive and threatens to produce an inflationary expansion of domestic money income. In either case the procedure is the opposite of what the gold standard would have required. But the gold standard rules were never very strictly observed, and the offsetting policy just described is in fact a logical extension of the central banking practice by which gold movements were frequently "neutralized" even in the best days of the gold standard.

Since the offsetting policy in itself does nothing to correct discrepancies in the balance of payments, it depends essentially on the existence of liquid reserves for covering such discrepancies. Reserves should be adequate to take care of all temporary discrepancies, "cyclical" or fortuitous. But if reserves are small, then even a small and temporary drop in exports may exhaust them, so that the offsetting policy cannot be continued until the balance rights itself again. Thus the extent to which this policy can actually be employed for the preservation of domestic stability depends on the volume and distribution of international liquidity. What the situation will be in this respect after the postwar transition period we cannot predict, but there are two favorable factors to be mentioned. First, the Fund represents a sizable addition to the volume of international liquidity. Secondly, there is now general agreement that speculative short-term capital movements should be controlled. This means that reserves of international liquidity will no longer be wasted on transfers of hot money, but will all be available for the settlement of balances on account of

⁵ See *Economic Stability in the Post-War World* (League of Nations, 1945), p. 232, or *Conditions of International Monetary Equilibrium*, *op. cit.*, pp. 11-14.

trade and other normal transactions including foreign investment. There seems to be, consequently, a fair prospect for the successful functioning of the buffer system of international liquidity as the normal method of operation.

VI

When the liquid reserves of some particular country or countries are depleted, then—and only then—is the time to take measures to correct the balance of payments. Measures of deflation or inflation are excluded for this purpose, unless they happen to be required for domestic stability. We are then left with the two types of measures already discussed: commercial policy in the wide sense, on the one hand, and exchange-rate adjustments, on the other. It is the method of exchange-rate adjustment that should be relied upon to bring international monetary relations into long-run equilibrium. But coming in between this method and the normal buffer method of international liquidity, there may be need occasionally for commercial-policy measures as a temporary means of correcting the balance of payments.⁶ This need may arise especially when demand and supply conditions are not immediately or sufficiently responsive to changes in exchange rates. The new currency and trading system does not prohibit commercial-policy measures; it lays down the conditions in which they are to be used; quite rightly, it looks upon such measures as exceptions rather than the norm. The presumption is that they are to be used only when the international liquidity system breaks down at some point, and when possibly a breathing space is needed for the restoration of long-run equilibrium through exchange-rate adjustment. And let me add once more that, in theory at any rate, the commercial-policy method of securing international monetary equilibrium can be handled, without prejudice to domestic employment, in such a way as to reduce rather than increase the barriers to trade.

The main conclusion of this paper is that the new system of international currency and trade is quite capable of being operated so as to allow scope for national policies aimed at high and stable levels of employment and at the same time to promote the flow of international trade. This system, which is developing largely at the initiative of the United States, presents an effective alternative to the bilateral solution. Bilateralism holds out two main attractions. First, bilateral clearing arrangements are supposed to have the advantage that a country can go ahead with any domestic expansion program without having

⁶ It is because of the temporary nature and object of such restrictions that, following the I.T.O. draft provisions, we have spoken of import quotas and not of tariff duties in this connection. Quotas can generally be imposed or removed by administrative action, while tariff changes usually require legislation.

to worry about its external accounts, since any increase in its imports will give rise to blocked balances available only for purchases in that country. But under a multilateral system providing for international liquidity, "defensive" commercial policies, and exchange adjustments, a single country should be able to enjoy substantially the same freedom from anxiety about its over-all balance of payments.

The second advantage of bilateralism is that it may enable a large trading nation to improve its barter terms of trade by bullying its weaker trading partners one by one. This policy of improving the terms, as distinct from the balance, of trade is of course a beggar-my-neighbor policy, not in the technical sense of "exporting unemployment," but simply in the sense of extortion. It leads to retaliation and so to commercial warfare all round.

The attractions of bilateralism are illusory. At the same time, we must realize that in the operation of the multilateral currency and trading system now in process of construction, we can no longer rely on traditional gold standard theory. The basic principles of the new system must be derived from the theory of employment as well as from that of international trade. It is useless to pretend that there is general agreement on these matters. The sooner such agreement is reached, the better will the system be able to function. The principles as I see them myself, and as I have tried to describe them, seem to have at least the merit of consistency, seeking in every way to combine the advantages of international trade with the benefits of full employment.

VII

We have discussed the principles in general terms without referring to any country by name. Such general discussion may be useful in clearing up our basic ideas, but sooner or later we must descend into the real world with its great diversity of national problems and national economic structures. In particular we must give some attention to the position of the United States in the new international system.

The position of the United States is important, first, because of the great preponderance of the American economy in the world today and, second, because of the wide fluctuations to which the American economy is subject or at least has been in the recent past. There is a widespread notion that all would be well in the international economy if only the United States could maintain high and stable employment at home. Some people even go so far as to say that, by way of international arrangements, nothing can be of any use unless there is high and stable employment in the United States.

This line of argument seems to me exaggerated and misleading.

The general purpose of the new monetary and trading system is to interpose between the member countries a set of "buffers" (avoiding the use of "barriers" as far as possible), giving each country some leeway for domestic employment policy and some protection for its domestic stability. The position of the United States simply calls for a particularly strong and reliable set of buffers—not barriers—so as to provide means of cushioning or neutralizing the external effects of American business cycles.

One way in which business fluctuations here affect the outside world is the highly variable demand for imports in this country. In technical terms, this country has a high income elasticity of demand for imports. There are several reasons for this. First, our imports consist mainly of raw materials and hence are closely geared to the rate of industrial activity here. By contrast, British imports, for instance, consist more largely of foodstuffs, for which the demand is much steadier. Second, some of our imports are of a marginal character. Domestic materials are sufficient for a low or average level of industrial production, but when activity rises above the average, imports are suddenly required to supplement the domestic sources. Third, our imports are sometimes greatly affected, in quantity and even more in value, by speculative inventory fluctuations. In boom periods there is much forward buying of imported materials, while in depression years buying is postponed.

A possible remedy for this state of affairs would be for this country either alone or under international auspices to set up buffer stocks of the primary products chiefly affected. This is not the place to discuss the details of the buffer stock proposal. Here we can only draw attention to the general point that a buffer stock scheme might be an effective means of ironing out the fluctuations in American imports.

Another way to offset the effects of domestic fluctuations on the outside world would be a countercyclical timing of American foreign investment. This, too, would tend to stabilize the supply of dollars to the rest of the world and would make that supply less closely dependent on the oscillations of business activity in this country. The idea of countercyclical foreign investment, just like the buffer stock idea, may not be easy to put into practice. But if it could be carried out, through the World Bank or otherwise, it would be a useful means, in addition to the other means we have discussed, of cushioning the external effects of American business cycles.

All this does not imply that the stability of the domestic economy in the United States is of no importance. It is important to the American people in the first place. Yet we might as well recognize that in a progressive and dynamic economy some ups and downs are inevitable,

and at the high standard of living prevailing in this country such ups and downs are easier to bear than at a low level of existence. Let us have in readiness, therefore, a system of buffer devices to soften the external impact of such fluctuations as may occur.

As far as international economic relations are concerned, it would seem that such a buffer policy could, at least to some extent, take the place of internal economic stabilization in the United States (or, indeed, in any country). In particular, if we stabilize the American demand for imports through buffer stocks, or if we stabilize the supply of dollars to foreigners through countercyclical foreign lending as well as buffer stocks, is that not—for the outside world—an acceptable substitute for stabilizing the internal American economy? To be sure, there is the *volume* of trade to be considered, as well as the question of *stability*. At a high level of national income and employment in the United States, the volume of imports will be larger than at a low level. The buffer mechanism as such cannot produce a large volume of trade. It is only the stability problem that it is designed to solve, and the solution in terms of the various devices we have discussed should, on the whole, prove satisfactory to the outside members of the system.

The new system *can* be worked in such a way as to safeguard domestic employment in the member countries without prejudice to the international division of labor. We in this country should seek to ensure that it *will* be worked in that way. The search for stability at high levels of employment represents the dominant attitude of most countries abroad. The problem does not greatly concern a country like Soviet Russia, which, by the way, is not a member of the system. It does concern countries that rely largely on price incentives and private enterprise. The survival of economic freedom in some parts of the world may depend, in the years to come, on the extent to which international currency and trading arrangements, in their actual operation, conform to the requirements of economic stability.

DISCUSSION

ARTHUR I. BLOOMFIELD: Since I find myself in substantial agreement with what the speakers have said in their interesting papers, I shall confine myself merely to an elaboration of a few of their remarks, notably those regarding methods of correcting balance-of-payments disequilibria in the post-transitional period.

One of the most significant features of the international financial and economic framework contemplated in the Bretton Woods Agreements and in the I.T.O. draft charter lies in the subjection to an international code of rules and supervision of the various major devices, notably exchange depreciation, exchange control, and quantitative import restrictions, whereby an individual country can directly influence its balance-of-payments position vis-à-vis the rest of the world. During the thirties, as is well known, these devices were commonly utilized in an attempt to raise domestic employment at the expense of other countries, or as instruments of exploitation and economic blackmail. In the future, however, they are to be sanctioned only, to borrow Dr. Nurkse's term, for defensive purposes when needed to enable countries striving to maintain high income and employment levels by domestic measures to do so without being frustrated by adverse balance-of-payments developments. Unlike exchange depreciation, exchange restrictions on current account transactions and quantitative import restrictions constitute, it is true, a departure from strict multilateralism, but so long as they are used only for defensive purposes, are nondiscriminatory in their application (or only of a limited discriminatory character), and are of essentially temporary duration, to be removed when no longer needed for defensive purposes, they would not involve a very serious violation of multilateral principles. It is implicit or explicit in the Fund Agreement and the I.T.O. draft charter that direct external controls are to be of this character. Whether or not they can in actual practice be confined to this relatively unobjectionable sort, however, will depend ultimately upon the extent and duration of the balance-of-payment pressures to which individual countries striving for full employment are subjected, and upon the effectiveness of other corrective measures open to them.

Countries with relatively limited reserves which are faced with deficits threatening to upset domestic stability are likely to take advantage at a relatively early date of their right autonomously to impose quantitative import restrictions on the basis of the rather ill-defined criteria laid down in the I.T.O. draft charter. Provided the interpretation of these criteria is not abused by these countries in such a way as to lead to restrictions which are clearly not needed, the Fund and I.T.O. would have no real grounds for objection, particularly since a sanctioned depreciation, the other major alternative, might not work speedily enough in the short run to stop the drain of reserves and the possible domestic deflationary pressure. In some cases, however, the Fund might be able to prevent the need for the imposition of such restrictions by a relaxation of its rules regarding the amount of foreign exchange that can be sold to a country per unit of time. But the

amount of additional international liquidity that can or should be provided to a country short of reserves may, even in the short run, be insufficient if the deficit is relatively large, and the member may in any case be unable to maintain its domestic employment by compensatory policies in face of the deficit. Quantitative import restrictions would generally enable it quickly and predictably to stop the drain of reserves and check any deflationary pressures occurring or threatening. If the underlying balance-of-payments pressure were of a temporary character, the restrictions would soon have to be removed according to criteria in the I.T.O. draft charter, and no further corrective measures would be necessary.

If the underlying balance-of-payments pressure necessitating direct controls is of a persisting sort, however, a depreciation should certainly be sanctioned by the Fund, and the controls removed when and if the corrective effects of the depreciation work themselves out. Balance-of-payments equilibrium which can be maintained over a longer period only by means of such controls would constitute an egregious example of fundamental disequilibrium. Even if, because of substantial reserves and an ability to maintain domestic employment by compensatory policies, no direct controls were imposed in the first place, a persisting deficit would in itself ultimately justify a depreciation.

In some cases, whether or not direct controls have been imposed, the Fund and I.T.O. may be able to alleviate or remove an underlying balance-of-payments pressure or actual deficit by recommending appropriate corrective measures. If a deficit is diagnosed to reflect a major "structural" development likely to endure, such as a shift in foreign tastes for a country's leading exports, it would be proper to recommend internal readjustments (e.g., development of new export products), and for the Bank to extend loans for this purpose. Corrective measures are also likely to be recommended in many cases to individual surplus countries, especially if a surplus has as its counterpart substantial deficits in a large number of other countries; i.e., if a currency is threatening to become "scarce" or has formally been declared so. Such recommendations might include internal expansion (although clearly not beyond a full employment level), tariff reductions, or increased foreign lending. But there is no assurance, of course, that in these cases recommended corrective measures, even if appropriate to the situation and if acted upon, will be sufficiently effective. Here, too, a depreciation may be essential.

If substantial unbalance in international accounts persists, therefore, we must pin our hopes chiefly on exchange-rate adjustments as a means of correcting that unbalance and of harmonizing full employment policies in individual countries with true multilateral policies. Both speakers assume that such adjustments will almost invariably be an adequate corrective of balance-of-payments disequilibria, and the only difference in their attitudes seems to be that Dr. Smithies favors sanctioning adjustments more promptly than Dr. Nurkse. It is only fair to point out that many well-known economists, notably Hansen, Balogh, Kalecki, Tinbergen, and Lerner, tend to take the opposite point of view. They have argued that under modern conditions

the relevant elasticities of export and import demand and supply are likely to be of such a magnitude that a depreciation may, apparently even in the long run, commonly worsen rather than improve a country's balance of payments, or cause at best only a relatively minor improvement. Now if indeed the effects were likely to be perverse, and the Fund were aware of it beforehand, the appropriate solution would be to appreciate the currency concerned. But I believe that such an effect, especially if depreciation has time to work itself out, will tend to be exceptional; and that in general depreciation may be expected to improve a country's balance of payments. Much more significant, however, is the possibility that a depreciation, especially if the deficit is large in relation to the gross value of a country's foreign trade, may often not result in a sufficiently *large* improvement, even in the long run, to wipe out the deficit, or perhaps at best do so only at the cost of a very severe deterioration in the depreciating country's terms of trade, or at the cost of reducing the volume of imports to a level inconsistent with domestic full employment. In particular, there is reason to question the effectiveness of a general depreciation of foreign currencies vis-à-vis the dollar as a means of correcting a scarcity of dollars resulting from a severe and prolonged depression in this country. On these particular matters, however, past experience and a priori considerations do not cast much light, nor can too much reliance be placed as yet on the recent statistical measurements of elasticity of export and import demand coefficients. If these suppositions as to the possibly ineffective character of exchange adjustments are wrong, so much the better.

Whether or not depreciation will generally be an appropriate device for correcting balance-of-payments disequilibria, it is in any case clear that the Fund will face a difficult task in deciding whether and when a depreciation should be sanctioned in any given case, and above all what *degree* of depreciation to sanction. The Fund can never know beforehand, except within a substantial range, what the effects of a given depreciation will be; the rates chosen may commonly be wide of the mark and so necessitate frequent unsettling readjustments. The possibility of considerable error in adjusting rates, as well as the possibility that depreciation may often be relatively ineffective or unsatisfactory as a corrective of disequilibria, merely strengthen the desirability of high and stable levels of income and employment in the leading countries, notably the United States, so as, among other things, to keep down the extent and duration of possible unbalance in international accounts. If this desideratum is not realized, the multilateral world trading system envisaged for the future might well break down altogether, and the restraints in the I.T.O. draft charter surrounding the use of direct import controls might, even with the best intentions in the world, have to be abandoned over a wide area.

ELMER WOOD: It is generally agreed that there is a point beyond which a country should not endure internal monetary pressure in order to maintain exchange stability or to avoid the use of exchange restrictions. In fact, when

deflationary pressure is carried too far, it not only causes unemployment but interferes with the flow of international payments to the point where the international standard (which the deflationary policy was aimed to protect) is itself jeopardized. But it is also true that, if countries insist upon freedom to pursue such external policies as conform to the requirements of stimulating internal demand (or even freedom limited by Dr. Nurkse's injunction not to create an exchange surplus), they may interfere with international price relationships and the flow of trade to such an extent that they produce internal disequilibrium and unemployment. Thus any international monetary plan in order to succeed—at least in a world where price incentives are the main driving force—must free national systems from severe deflationary pressures and at the same time provide for exchange stability and without the use of commercial restrictions to balance the international accounts.

What we need is an international money managed with an eye to the requirements of the international economy as a whole, with the individual countries dealing with their special problems of keeping in step with the system by means of internal price and cost adjustments. At the present time the only currency that might serve this purpose is the dollar, though our management of it might be influenced by the International Monetary Fund authorities.

No doubt there will be a considerable period before the various countries want to settle down to definite exchange parities. And of course there will always be unusual situations that require exchange adjustments, such as revolution or a devastating drop in the world demand for a country's special products. But it is quite a different matter to deal with every serious reduction in the international reserve by exchange restrictions or adjustments in order to avoid any pressure at all on the internal economy. If we assume as much stability in the level of demand in the world as a whole as it is humanly possible to attain, internal pressure merely in order to keep in step with the system should ordinarily entail no unbearable sacrifice.

My general criticism of Dr. Nurkse's position is that he overstresses the importance of maintaining a high level of internal demand and underestimates the destructive effects of exchange restrictions and devaluation. Has not current opinion gone too far in expecting only one-way price flexibility? It was a great accomplishment for the world to renounce the use of severe deflationary pressure, whether to meet the requirements of the international standard or for any other reason, and we do not want to go back to the old copybook maxims. But under any price system there must be some flexibility in individual industries and in particular areas. Large areas under one sovereignty have this problem. Surely the different sections of the United States would not gain in economic prosperity if they were to acquire local monetary autonomy and freedom to apply import restrictions against other sections.

Dr. Nurkse may point out, however, that there is no present prospect of the dollar's being managed with a view to maintaining economic stability

in the world economy as a whole, and that the technical proficiency required would be more than one might reasonably expect. This raises the question whether our average performance is likely to be lower than what the various countries would do for themselves if they followed autonomous policies. But it seems to me that there is at least a hope of solving the problem of maintaining world prosperity along the lines of a stable international standard, whereas autonomous policies do not offer even this hope.

A high level of world trade requires an integrated cost-price structure throughout the international economy. Exchange adjustments and import restrictions varied to balance the international accounts destroy this structure. Severe deflation does this too, of course. But if the contraction of demand is not too great, the process of adjustment can proceed continuously and simultaneously in all parts of the economy; whereas with exchange devaluation every tentative readjustment of prices and costs is liable to disruption by a whole schedule of new price distortions—even though some distortions that already exist may be removed.

It is true that the exchange devaluations of the thirties were accompanied by an expansion of both internal and external trade. Cutting loose from the gold standard at that time meant getting release from severe monetary contraction. It does not follow that exchange devaluation would yield similar results under quite different circumstances; e.g., when there had been only slight deflation or a period of inflation.

Import restrictions in order to deal with a shortage of international means of payment lead to the mutual destruction of export markets. An individual nation trying to adjust to a disordered world may be justified in using such measures; but they do not belong in a *general* solution of the problem of international adjustment. Dr. Nurkse recommends them only as a stopgap until the balance of payments can be adjusted by an appropriate change in exchange rates. However, if used at all, they create conditions which encourage their further use as defense weapons. Once applied they tend to remain, even though the lack of international liquidity which gave rise to them no longer exists.

Perhaps there would be rather general agreement that circumstances may frequently warrant control of international capital movements—even though it does mean the policing of current transactions. Dr. Nurkse points out that it serves no purpose to waste international liquidity on hot money transfers. Of course the prospect of exchange stability would do away with one motive for capital movements. But investors in countries where more or less fundamental changes in economic systems are in prospect are likely to seek shelter in foreign assets. The system of international investment of the nineteenth century was not confronted with a similar situation.

When we turn to the monetary policy of the United States we naturally find quite a different set of problems from those that face other countries. Our authorities are not limited by balance-of-payments considerations for the simple reason that they control the source of international liquidity. We are therefore free to choose the policy that suits us. However, our obligation as

the leading financial center requires that we consider the needs of other countries as well as our own. In the main, a policy which contributes to a high level of income at home will contribute to the same result abroad, but there may be times when there is a conflict of interests—for instance, when inflationary activities are much stronger in the United States than they are elsewhere. But a large increase in our gold stock is no criterion of mistaken action on our part—a failure to expand demand and import or a failure to invest abroad—as has so often been maintained. We have to turn to other criteria, such as the level of money income in the United States, to judge our policy. If other countries prefer our goods or securities to gold, it would only cause inflationary action here and abroad to try to rid ourselves of it, and without affecting our gold holdings appreciably.

We should therefore continue to disregard the state of the gold reserve in framing our monetary policy. If other countries indicate an unwillingness to leave sufficient gold with us to maintain gold payments we might as well relinquish the gold standard at once. For competitive deflation by the international center would certainly endanger any international standard, while with the dollar anchored to a stable economy we might hope to retain an international standard without gold.

Obviously we should not resort to devaluation as a device for stimulating exports or as a means of raising the internal price level, as in 1933, regardless of whether other countries resort to such methods. Other countries are not responsible individually for the functioning of the international standard; the United States is responsible.

If our gold supply becomes unmanageably large we should try to handle the problem by joint action and without letting it affect the network of exchange rates.

Finally, we should abandon the policy of a fixed interest rate structure and return to general monetary controls. The dollar will certainly not be an appropriate international currency if the specter of unemployment makes us fear to deal with inflationary pressure by monetary action.

If we want to minimize the importance of political borders we should try to integrate the various national economies as closely as possible. Whether a close union is possible depends partly upon how well the American economy functions and partly upon how much importance is attached to the state control of economic activity in the various countries. If the dollar is badly managed and the other national economies *are* exposed to serious fluctuations as the result of it, then of course they should seek buffers against the United States. But it depends on *how much* internal pressure a close association with us entails. I doubt very much whether they can have the best of both worlds: freedom to pursue full employment policies regardless of the balance of international accounts and at the same time the advantages of economic union.

But the going will be very tough for countries that retain their freedom of action. They will inevitably be driven into bilateral arrangements and then into various economic alignments or currency and trading areas, areas that

are large and strong enough to withstand mutual isolation. Perhaps differences in the social aspirations of different peoples will do this anyhow. Yet it seems to me that a solution along the lines of one world economy, with the direction and terms of trade not determined politically, might be a happier one. Such a solution calls for an attitude of not temporizing with nationalistic controls.

The United States has the necessary leverage to play a strong hand in the economic reorganization of the world and it seems to me that our government, while living up to our special obligations, might become more insistent on the formation of a real world economy.

RAYMOND F. MIKESELL: The desirability of multilateralism as a fundamental international economic policy is rarely disputed among American economists. The benefits of multilateral trade and its compatibility with domestic full employment for all countries have been well stated by the two speakers. However, the fact that serious doubts have been raised abroad regarding the advisability of debtor countries entering into a multilateral system requires more than a perfunctory disposal of the alleged advantages of a bilateral or a restricted multilateral system. I intend, therefore, to play the role of the devil's advocate for a few minutes at least, with the hope that my remarks will not put me in bad grace with the good angels of the multilateral heaven hovering about me.

First of all, I believe that the crucial problem is not simply the ability of the nations pursuing full employment policies in the face of depressions abroad to maintain a balance in their external accounts. Most nations have learned all too well how to control their international accounts by means of exchange and quantitative trade controls. Both the Fund Agreement and the I.T.O. charter recognize the right of countries threatened with balance-of-payments difficulties to employ controls. For the postwar world, to control or not to control is not the question. Rather the question is, how to control and for what purposes. The program outlined by the Monetary Fund Agreement and the I.T.O. charter is basically one of subjecting exchange and quantitative trade controls to international supervision.

Let us consider the case of a country which is following a domestic full employment policy and which experiences a sharp reduction in external demand for its products due to a depression in a country which is a major buyer of its exports. We will assume that the full employment country immediately compensates by appropriate monetary or fiscal measures for the decline in external demand. The country may for a time at least be able to avoid a reduction of its imports by drawing down its foreign exchange reserves or by going to the Fund. However, if the decline in the demand for its exports is large and sustained, these sources of liquid reserves are likely to prove inadequate and steps must be taken to control imports.

If a sharp reduction of imports is required, serious economic readjustments may be involved. The economy of the full employment country is geared to a particular level of imports without which it will suffer a decline in real income. For example, if the country reduces its raw material imports, its

industrial production will be cut down with a consequent reduction in supplies for domestic consumption and a possible further fall in exports. The country, of course, may be able to redirect its trade to other countries whose imports from the depressed area are likewise affected. In fact a redirection of trade away from the depressed country is implied in the scarce-currency provisions of the Monetary Fund. However, needed imports from other areas may be inadequate or obtainable only at sharply increased costs. Moreover, it takes time to develop new markets for exports and new sources of supply.

The point to be emphasized is that in the event a currency is declared scarce by the Fund the greatest sufferers may be those countries which tend to have an unfavorable balance with that country and which are highly dependent upon that country for essential commodities and services. The most serious problem which may be created by a depression in the United States is not the adjustment of the balance of payments of other countries, since this can be accomplished by the use of controls, but the disruption of the economies and the decline in real income in countries which are highly dependent upon imports from the dollar area.

But could not this dilemma be solved by currency devaluation undertaken by the full employment country? The difficulty with devaluation is, as Mr. Balogh and other critics of multilateralism have pointed out, that the demand for exports, in the short run at least, is likely to prove inelastic, or at any rate not sufficiently elastic to appreciably affect the balance of payments. Imports may be cut down by devaluation but this could be accomplished more effectively by a judicious use of import or exchange controls. Over the long period—a period sufficient for structural changes to take place—devaluation will, I believe, be effective in restoring the international balance. But in the short run, devaluation may prove to be a rather weak expedient. Of interest in this connection is the recent acceptance by the International Monetary Fund of the par values of the currencies of its members on the basis of admittedly overvalued existing rates of exchange. It will be recalled that the argument given by the Fund in accepting these rates was that under existing conditions a reduction of the rates would not significantly improve the balance of payments of the countries in question. It is my belief that the Fund in reaching this decision failed to give adequate consideration to the long run. This failure is particularly significant in view of the fact that once established, exchange rates have a way of perpetuating themselves. In accepting the existing rates the Fund may have discouraged the making of appropriate changes in economic structures and patterns of trade that are necessary for the eventual attainment of equilibrium without the indefinite maintenance of severe restrictions.

Now that I have paid the devil his due, I will return to the heavenly hosts of the multilateralists by attacking the position of their adversaries. In brief, my criticism of the European apologists for bilateralism is that they fail to show how the rest of the world could free itself from economic dependence on the Western Hemisphere through the development of a system of bilateral or semimultilateral clearing or payment arrangements. The late Lord Keynes recognized this dependence in his speech supporting the Anglo-American

Financial Agreement in the British House of Lords. In this address Lord Keynes stated that the alternative to the acceptance of the conditions of the loan requiring the convertibility of sterling for current international transactions "is to build up a separate economic *bloc* which excludes Canada and consists of countries to which we already owe more than we can pay, on the basis of their agreeing to lend us money they have not got and buy from us and one another goods we are unable to supply."

The adoption of a policy of self-sufficiency and economic isolationism by a small group of nations is to doom these nations more or less permanently to a relatively low level of real income. Just as the handicraft system was probably more stable and involved less risks for the individual than modern industrial society, the dynamic operations of a multilateral world present greater uncertainties than a world trading system based on barter trade. But the rewards are high in both cases.

In conclusion I would like to suggest that even the much vaunted stability of bilateralism may prove to be quite illusory. Under bilateralism trade is subject to continual negotiation with the governments of other countries whose decisions are influenced by a variety of economic and political motives. In fact many countries may discover that the hands of foreign bureaucrats who determine how much can be imported and exported will prove to be even more fickle than the unseen hand of free and multilateral trade.

HOWARD S. ELLIS: A substantial concensus, exemplified by the preceding papers, seems to prevail that the problem of unemployment should chiefly be attacked from the domestic rather than the international angle. This conclusion, which I regard as sound, rests partly upon quantitative economic considerations, but also upon misgivings as to how far international co-ordination of domestic policies can go in the present scene. In this setting it is particularly significant to explore the latitude which obtains for unco-ordinated national policies for achieving high employment without disrupting international equilibrium. Smithies seems to rely rather heavily upon "prompt" adjustments of exchange rates. Nurkse would adjust exchange rates only to what appear to be lasting changes; he would hedge import restrictions (the really relevant sector of trade controls) with rules designed to secure their economical use; and he would balance the restrained use of these two devices by positive measures to stabilize a country's foreign account despite domestic fluctuations.

In attempting to assess the merits of these differences of *emphasis*—the opposition is by no means categoric—it may be profitable to take advantage of the conceptual precision which Nurkse supplies in his method of distinguishing aggressive and defensive tactics of commercial policy. They depend respectively upon the existence of favorable and unfavorable balances of payments. This precludes the making of unemployment in the home economy, either absolutely or relatively to other countries, the earmark of disequilibrium in the rate of exchange. Undoubtedly, as Pigou has explained, we can profitably entertain conceptions of international equilibrium and disequilibrium which lie deeper than the balance of payments, as for example, in the relative

supplies of labor, or of capital;¹ and, I presume, he would nowadays add, in the relative employment of resources. Hansen has warmly defended the introduction of full employment into the concept of international exchange equilibrium, and somewhat earlier Nurkse had spoken favorably of the idea.²

It betokens no lack of concern for unemployment to maintain, as Nurkse now does, that the balance of payments without regard to the state of employment determines whether import restriction is aggressive or defensive. Otherwise we find ourselves in the position that any sort of import restriction is justified so long as unemployment exists. Furthermore, lacking the clear criterion of the balance of payments, the International Monetary Fund would sink into a morass of trying to determine unemployment in various countries, its relative burden, whether unemployed plant capacity also counted, etc. Finally the employment criterion would thrust a responsibility upon the Fund which goes directly contrary to the consensus that unemployment should be solved by domestic rather than by international measures.

Import restrictions are thus a defensive measure against balance-of-payments difficulties. Nurkse would severely limit their employment by three rules, with which I agree completely: they must be removed with the disappearance of the deficit; or if the deficit persists, it must be met by exchange-rate adjustment and not by restricting imports; and finally, reduction of import barriers by surplus countries is to be preferred to retention or increase of these barriers by deficit countries. These are necessary rules. On the contrary, there would be something paradoxical in an insistence upon prompt changes of exchange rates without any corresponding insistence relative to the term of import restrictions. The very purpose of import restrictions is to bridge over *temporary* balance-of-payments difficulties without immediate exchange adjustment. By contraries one might possibly hold that exchange rates should be more or less continuously adjusted, in which event import restrictions would be superfluous. But we cannot have it both ways—persisting import restriction with substantially free exchange rates—without falling into simple protectionism.

Against too great alacrity in adjusting exchange rates several considerations weigh heavily, aside from the standard objection that it increases risks and impedes private foreign lending. It proliferates occasions for the Fund to err in judging fundamental exchange positions and it ignores the high degree of adaptability of economic life in adjusting to prices which start out as being nonequilibrium elements. Finally, since devaluation more frequently comes into the picture than its opposite, it encourages domestic full employment measures of an inflationary character. These considerations would counsel economy of resort to exchange revision, coupled with the admission of import regulation only for tiding-over purposes, and only then if the balance-surplus countries cannot be prevailed upon to increase their imports.

Smithies returns to classical economic theory in associating the removal of tariffs and trade controls with improved real income per capita rather than

¹A. C. Pigou, *Essays in Applied Economics* (London, 1923), pp. 161-162.

²Alvin Hansen, "A Brief Note on Fundamental Disequilibrium," *Review of Economic Statistics*, Vol. 26 (November, 1944), pp. 182-184; Ragnar Nurkse, *International Currency Experience* (League of Nations, 1944), pp. 124-127.

with more employment; and much is to be said for a renewed emphasis upon this face of the matter. I would agree that the reduction of these trade (particularly import) barriers can produce unemployment upon their first impact. But I would hold that a longer view would see not only a recovery to the position before the change but to a positive gain in employment through an expanded volume of exports *and* imports. Recently it has become almost tendentious to present statistical evidence as to the low price elasticity of American imports. But this elasticity, it is shown by other studies, is increased if the dutiable import items are subtracted. Furthermore, the statistical studies usually deal with such short periods that the multiplier effect of tariff and quota loosening by one country throughout the network of world trade has not had time to assert itself. Since the removal of a tariff on ordinary elasticity assumptions affects the terms of trade adversely, the gain in real income which Smithies envisages would apparently *have* to come from the expanded quantity of things bought and sold abroad, and this is not easily imaginable without increasing employment. Naturally tariff reduction is only a minor method of attacking domestic employment problems, but it is worth the effort. On the other hand, import restriction, while it may be resorted to in extremity because of its favorable impact effect upon domestic employment, cannot fail of an unfavorable impact upon employment and effective demand abroad, and a longer-run adverse influence on the home economy.

I should like to emphasize another of Nurkse's points: that it is possible to exaggerate the dependence of multilateralism in the future upon high and stable employment in the United States. In passing it is worth while to observe that this dependence seems to afford no solid reason for a country's not participating in the Fund. An open multilateral trading system permits a foreign country to shift its exports to other countries if depression strikes sooner or sinks more deeply in the United States than elsewhere. Outside the Fund, the particular country would probably have bound itself extensively by bilateral commitments, and hence the supplanting of exports to the United States by exports in other directions would not be readily available. In addition it would forego the liquidity reserves afforded by the Fund.

Aside from the flexibility of multilateral trade underwritten by the Fund and its interposition of international reserves, three other factors can in the future reduce the unemployment imposed upon other countries by a depression in the United States. In the first place, state controlled production has increased abroad, and government can—at least “in theory”—simply order a switch of production from exports to home consumption when foreign demand declines. Secondly, as Nurkse hopes, our demand itself may be buoyed up by buffer stock arrangements and an American policy of investing abroad after a contracyclical pattern. But third—and in the next decade this will be very significant, I believe—for the chief commercial nations besides ourselves the primary economic problem will not be employment but productivity. Declining demand for exports can be compensated by absorbing the flow of output into domestic plant and equipment or into higher consumption standards.

Despite these mitigating factors, instability in our economy would seriously

threaten other countries' balance-of-payments equilibria and the survival of multilateral trade. But this does not mean that international economic arrangements can avail nothing unless there is high and stable employment in the United States.

Against the international propagation of American business cycles there could be no more powerful weapons than a contracyclical investment policy and an effective buffer stock organization. For both, however, it must be said that the political or "practical" difficulties are as striking as the abstract possibilities. Riefler has treated both these aspects of the buffer stocks proposal with great sagacity in a recent journal article.³ As for capital movements it is possible "in theory" entirely to offset the income elasticity of our imports by accelerating foreign lending during slack periods and tapering off new lending or even taking net repayments during prosperity. Furthermore this policy would exercise a potent contracyclical influence in our domestic economy.

But the practical difficulties are great. Imagine how paradoxical it would appear in the present setting to answer foreign governments clamoring for American capital that these operations would have to be postponed until we, and hence they, were threatened by the next depression; or imagine the outcry which would arise within our own borders if government funds or even private funds supported by government guarantees were to be directed abroad in the midst of depression and popular demands for domestic public works and other employment creating outlays. Again, direct investments by American corporations abroad could be subjected to this policy only by an almost thoroughly controlled economy, for the natural tendency is exactly cyclical. And we must recall that our direct investments are quantitatively more important than the total of private portfolio investments. Finally a contracyclical policy defined in American terms could run directly counter to the canon established by Smithies that the needs of borrowing countries should be the main criterion of lending.

Despite these difficulties there is no insurmountable obstacle to a happy union of national independence and international economic comity. But like marital bliss it requires lots of arranging.

ABBA P. LERNER: The outstanding feature of this session is the extent of agreement. Nearly all the differences in the discussion were either superficial or trivial. It reminded me of the general agreement between nearly all economists during the last century or two about the desirability of free trade. That general agreement was not at all successful in bringing about the appropriate action. The reason for this, we now know, was the general assumption made by the economists, more or less unconsciously, that somehow full employment was being maintained all the time. It was this false element that deprived the free trade proposition of its power to convince.

The agreement between Mr. Smithies, Mr. Nurkse, and nearly all the other

³ W. W. Riefler, "A Proposal for an International Buffer-Stock Agency," *Journal of Political Economy*, Vol. 54 (December, 1946), pp. 538-546.

discussants stems from the recognition of this error and the integration of the free trade issue with the employment problem. As such it has great promise for future public policy.

I was surprised that Mr. Nurkse did not suggest export subsidies as a further method, in addition to import restrictions, by which a country could correct a foreign balance deficit. If he had done that he would have been able, by showing how the combination of import taxes and export subsidies is identical in effect with a depreciation of the exchange rate, to demonstrate more clearly why exchange depreciation turns out to be the ultimate solution of all such fundamental disequilibria.

Mr. Nurkse reluctantly suggests that countries be permitted to increase import barriers in case of a foreign balance deficit—these barriers to be reduced again as soon as the deficit becomes a surplus. But there is no reason why the same reduction in barriers should not be required whenever there is a surplus, even if the barriers were originally imposed for quite other reasons. Such a generalization of the requirement of the reduction of import barriers in the case of surpluses would make it unnecessary for barriers to be raised in case of deficits, for if all surpluses are corrected by reduction of barriers, there will be no deficits left. The world-wide elimination of surpluses involves the world-wide disappearance of deficits.

Such a suggestion might even be made more palatable by the fact that it would eliminate the need for any adjustments of exchange rates until all import barrier had been removed by all surplus countries.

The suggestion that exchange rates should not be permitted to move very often may look like a departure from the complete utilization of price mechanisms, but this is only a superficial departure. The function of a price change is to influence the demand or the supply. Changes which are so rapid that their effect on demand and supply cannot be worked out are not performing this function, and their failure to perform this function is exactly what was under discussion in the guise of very low elasticities. The suggestion, therefore, that temporary increases in restrictions (or better still, permanent decreases in restrictions on the other side) be substituted for the change in the exchange rate is no rejection of the price mechanism, but merely a recognition that there are cases in which a price change does not perform the function which would justify it. The same holds for the extension of credits to cover temporary exchange disequilibria.

It seems to me that unnecessary concessions were made by both Mr. Smithies and Mr. Nurkse for the sake of developing interesting arguments. Mr. Smithies' declaration that stable employment is sufficient for international equilibrium even if it is not full employment, is perfectly correct. But since there is no natural tendency for employment to be stable, and since the policies which would be necessary to make employment stable could as well be used for establishing full employment, I do not see what there is gained by such a generalization. In the same way, Mr. Nurkse develops the techniques needed for neutralizing the effects of cyclical or other changes in the level of employment in other countries. The skills required to offset these repercussions are at least as great as those which, by establishing full employment,

would make them unnecessary. Again, no very useful practical purpose seems to be served by this theoretical elaboration. But all these are really unimportant points. The great thing is to overcome the general tendency to regard stable exchanges or the gold standard as so desirable in themselves as to warrant considerable sacrifices for their maintenance.

There are two points which I would like to add because I think they can play an important part in the spreading of this enlightenment. One is concerned with the argument that even if foreign exchange flexibility does not do very much harm to ordinary traders because they can safeguard themselves by hedging, the absence of complete exchange stability nevertheless hinders international trade by discouraging investors from building factories to make goods to be sold abroad. Such investors are deterred by the consideration that they might find their ventures rendered unprofitable by an adverse movement in a foreign exchange rate.

The kind of analysis we have heard can easily be developed to show that if the underlying conditions are such as would result in the reduction in the value of the foreign currency, the prohibition of this adjustment could result only in one of the alternative methods of adjustments. That is to say, we could, instead of an exchange depreciation, have an increase in tariffs, or a depression, or a general price reduction in the country affected, or some combination of these. But each of these is just as harmful to our manufacturer for export. His gain from exchange stability is completely illusory.

The other point is that raised by Mr. Wood. If it is good for a country to be able to adjust its exchange rate, why is this not good for a state, county, city, village, or even family? This is a very powerful argument and reminds one of the free traders' argument on the same lines against protection. The only way this attack can be met is by giving a satisfactory principle which would show where the possibility of exchange adjustment is desirable and where it is not.

There is such a principle. Where there is mobility of labor, and for this purpose it is real and not just legal mobility which is relevant, there is no need for an exchange adjustment to restore equilibrium between a deficit area and a surplus area. This is because the unemployed in one area where there is a depression can go to the other area, where there is a boom, and get a job. Wherever there is not such mobility, the only alternatives to exchange adjustment are general price adjustment, or depression, or trade restrictions (or some combination of these). General price adjustment would be as good as exchange adjustment, but is very unlikely to come about. The rejection of exchange adjustment therefore results in practice to the invocation of depression or of trade restriction—solutions which can hardly be defended if they are seen at all clearly.

It is true that if there were general mobility and we had a really united economic world, one of the less important beneficial effects would be fairly stable exchanges. But to hope to establish the economic world unity by legislating this particular symptom of it is not very practical. The lack of practicality in such proposals, joined, as they are, with the most laudable intentions, demonstrates what I am tempted to call a sentimental internationalism.

THE ECONOMY OF THE U.S.S.R.

NATIONAL INCOME ESTIMATES OF SOVIET RUSSIA— THEIR DISTINGUISHING CHARACTERISTICS AND PROBLEMS

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The nature and scope of national income estimates in Soviet Russia and the problems involved in their preparation are determined by the peculiar structure of the Soviet economy. To understand these estimates and their problems it is necessary at all times to keep in mind their peculiar backgrounds.

An American student of the Soviet national income estimates, even if he knows the Russian language, as is the case with at least one of the two authors of this paper, is greatly handicapped in his studies by the meagerness of the Russian published materials on the subject as well as by the unavailability of some of these materials in the American libraries. Barring the publications issued prior to the collectivization of agriculture in the early thirties, which are now out of date, the Soviet literature on national income is comprised today of only three or four books or monographs¹ and of half a dozen major articles published in the economic journals of the country.² Of the books in question, only two are available in New York and Washington libraries,³ and only one of these deals with methodology,⁴ and even that one fails to deal with it completely. The articles although authoritative enough are mostly theoretical in nature and are singularly devoid of concrete information. All in all, the literature is scant in comparison with the American one, but still richer than that of most countries.

Development of Russian Estimates in Their Peculiar Setting. The systematic preparation of national income estimates in Soviet Russia began in the middle of the twenties. From the very outset the main emphasis in the estimates was placed on measuring the growth of

¹ D. I. Chernomordik and Associates, *Narodny Dokhod* (Moscow, 1939); M. B. Kolganoff and Associates, *Narodny Dokhod* (Moscow, 1940); I. M. Krasnolobov, *Planirovanie i Utchet Narodnago Dokhoda* (Moscow, 1940). The latter book is unavailable in the New York libraries, but some of its contents are summarized in the recently published book by S. N. Prokopovitch, *Russland's Volkswirtschaft unter den Sowjets* (Zürich, 1944), Ch. VI (in German).

² A. Pervuchin, *Planovoie Khosiaistvo* (1934), No. 4; V. Katz, *Planovoie Khosiaistvo* (1934), No. 7; M. Kolganoff, *Problemy Ekonomiki* (1937), No. 3-4; D. I. Chernomordik, *ibid.* (1938), No. 5; Alkind, *ibid.* (1940). Prior to 1932, the most important sources are S. G. Strumilin, *Narodny Dokhod* (Moscow, 1929) (unavailable in New York); Kontrolnyie Tzifry (1929-30); and V. Katz, *Narodny Dokhod* (Moscow, 1932).

³ Chernomordik and Kolganoff, *op. cit.*

⁴ Chernomordik, *op. cit.*

national production. In accordance with the Marxian concept, national production was defined as embracing "material production" only; i.e., the outputs of agriculture, industry, building construction, and the services of freight transportation, and of retail trade. The term "industry" includes in Soviet Russia, mining, forestry, hunting, and fishing, besides manufacturing, electric power, and other such industrial divisions proper. The services of communications are sometimes included in material production and sometimes not. Definitely excluded from national income under this "material production" concept are the services of government, passenger transportation, and dwellings as well as personal and domestic services.

National income from the very outset was shown accordingly as produced in the aforementioned five divisions of material production. It was also broken down into the portion created in the so-called "private" sector of the economy (independent farming, private trading, and handicraft production) which was then still in existence, and of the portion created in the so-called "collectivized" sector which was then being rapidly expanded at the expense of the private sector. The national income was measured both in current and in constant prices so as to reflect both its current composition and its growth. The constant prices were at first taken as of the year 1913 representing conditions prior to World War I. Beginning in 1928, however, following the consummation of an extensive reform and stabilization of the monetary and price systems, the national income computations were changed to the prices of 1926-27.

Some interest began to be displayed during the twenties also in the distributional aspects of the national income. Its division into wages, profits of enterprises, and taxes and into consumption expenditures and capital accumulation was shown. The income payments to individuals were broken down into shares of various social classes, such as industrial workers, employees, petty tradesmen, independent farmers, Kolhoz members, and the like. National income estimates were being correlated with the national budget, with the unified financial economic plan, and with the five-year programs of capital investments.

The estimates were becoming ever more informative in character and were quoted in governmental budgets and other documents of prime importance. They were developing into an important tool of financial, economic, and social planning and analysis.

Sometime after 1931, however, a sharp change in the scope, form, and content of the national income estimates took place. The further estimating of the national income in current prices was suddenly abandoned and only the estimating in 1926-27 constant prices was continued. This had the effect of cutting down materially the informational

content of the estimates. Their value was further reduced by the simultaneous suspension of the further preparation and publication of the unified index of prices. This index was found by government authorities to place undue weight on prices in the private as distinguished from the government market, to account inadequately for the prices of new goods, and otherwise to give a distorted picture of the real changes in the price level and a wrong basis on which to formulate governmental price and monetary policies. The subsequent shift to active military preparedness and, finally, the outbreak of the war undoubtedly must have added further reasons against the publication, if not preparation, of extensive statistical data on the nature of national production and on the composition of national income.

With the discontinuance of estimates of national income in current prices, the estimates in constant prices lost their contact with reality. The estimates became completely divorced from all current financial transactions of society, all of which are expressed in current prices. They could no longer be related to the national budget, the unified financial economic plan, and the five-year plan, or any parts thereof. National income could not be compared with the aggregate current wage payments, profits of enterprises, taxes, government expenditures for military and social purposes, consumer expenditures, replacements of and additions to existing capital, and other published data on the various aspects of the financial and economic life of the national community. National income could no longer be broken up into any of these components or any other distributional shares. All of such breakdowns which had been started in the late twenties were now given up. National income estimates became a mere index number of the growth of material production and a very imperfect and abstract index of it, at that. The size of the national income expressed in 1926-27 prices lost any significance taken by itself. National income estimates became of very little use in financial, economic, and social planning and, hence, of slight interest to either the government or the community at large.

This is the status of national income estimates in Soviet Russia today. The estimates have very little informative value. Unlike in capitalist countries in which national income estimates are used extensively in fiscal planning, in Soviet Russia where planning is used on a much larger scale, national income estimates are playing very little part therein today.

Some Soviet economists recognize the unsatisfactory condition of the existing national income estimates and wish to see it corrected. They urge the resumption of the earlier calculations of national income in current prices and its break down by distributive shares. They also advocate renewal of the work on a unified price index which would

reflect changes in the purchasing power of the ruble. They emphasize the focal roll which national income estimates can and should play in social and economic planning. They stress the fact that the very core of that planning must be the planning of the national income itself in all of its major distributional as well as production aspects, and that this requires the preparation of comprehensive national income estimates covering these aspects.⁵ To what extent the judgment of these economists will prevail, remains to be seen. After all, the existing restriction on the contents of the national income estimates is decreed by high policy. The latter is determined by political authority, not by the opinions of economists. Whether that high policy is going to undergo basic changes in the near future is something that nobody can tell.

Soviet Concept of National Income. Although the concept of national income in Soviet Russia is still limited to the creation of physical goods only, the validity of this limitation has begun to be questioned there. One or two Soviet economists of standing have advanced the claim that Marx never intended to limit the concept of material production to the creation of physical goods only.⁶ Pertinent quotations from his writings have been brought to light to show that he embraced under material production all labor resulting in the creation of surplus value and capital formation, and that he specifically disclaimed the validity of the distinction of productive from unproductive labor by the mere form of the created product. Attempts have been made to show that Marx was willing to treat services as parts of material production if and when they were produced under a capitalist type of organization and gave rise to surplus value and to capital formation. It has been further stated by these authorities that Marx's definitions of material production and national income were made in terms of the operations of the capitalist society and might have been modified and broadened considerably if made in terms of the operations of a socialist order. Upon these grounds a broadening of the official concept of the Soviet national income has been urged to include in it the services of passenger transportation and, by one noted economist at least, even of the services of government.⁷

An examination of Marx's writing lends support to these contentions. Suffice it only to say that Marx characterized the labor of a hack writer hired by a publisher to compile works in political economy for a fixed wage as being productive in the economic sense. On the other hand, Marx identified Milton's writing of *Paradise Lost* as unproduc-

⁵ S. Turetsky, "Dynamics of Prices," *Planov. Khos.*, 1939, No. 1, pp. 122-126; V. Katz, *Planov. Khos.*, 1934, No. 7, pp. 124-125.

⁶ D. S. Chernomordik, *Prob. Ekon.* (1938), No. 5, and S. G. Strumilin, *Prob. Planirovaniia* (1932).

⁷ Strumilin, *op. cit.*, p. 397.

tive labor in that sense inasmuch as it was not done for an employer or primarily for material gain. Similarly, Marx described the performances of a concert singer working for a company as productive labor while identifying like performance by a singer carried on on his own account as not being in that class. In either case the key to Marx's identification of labor as part of material production (which was his preferred term) was whether the labor created surplus value and capital. The entire analysis of national income, its scope, and its composition, from beginning to end, was carried on by Marx in terms of capitalistic institutions and bore no relation to the institutional arrangements of a socialist society.⁸

The aforementioned suggestions made by the one or two Soviet economists referred to above, to broaden the existing concept of national income in the light of a new interpretation of Marx's writings, have been of little avail. Contrary quotations from Marx's writings have been offered by other Soviet writers to show that the original interpretation of his writings was correct and that he did identify material production peculiarly with the production of physical commodities. It was insisted that Marx was willing to classify as parts of material production only such services, like freight transportation or trade, which directly facilitate production and delivery of physical goods, but not others which furnish direct satisfactions. The proposed inclusion of the services of passenger transportation in national income was opposed on the ground that it would constitute the first step in the direction of an ultimate complete defacement of the distinction between material production and services. It was said that consistency would then require the inclusion also of the services of education, hospitals, sports, recreation, and what not. Even the services of police and national defense might have to be classified as parts of production. The concept of government itself might have to be changed from that of a repressive agent to that of an agent of production. The theoretical implications of any break in the existing line of demarcation between material production and services are represented to be too serious to be permitted.⁹

The application of the restricted material production concept in the Soviet estimates, compared with the comprehensive production concept used in the estimates of other countries, however, results in a much less underestimation of the Soviet national income than might appear at first glance. First of all, the exclusion of governmental services from the national income is counterbalanced in large part by the more com-

⁸ Karl Marx, *Zur Theorien über den Mehrwert* (Berlin, 1923), Vol. I; Appendix; "Adam Smith and his Concept of Productive Labor," p. 416, *et seq.* (in German).

⁹ A. Alkind, *Prob. Ekon.* (1940).

plete inclusion in it of taxes. Whereas the capitalist countries as a rule include in their estimates only direct or personal taxes, Soviet Russia includes in its own practically all taxes. Moreover, not all of the non-governmental services by far are excluded from the Soviet national income. Some are included under another name. For example, the services of communal restaurants are included under retail trade, while legal services to business are included in the general overhead of enterprises. Furthermore, some of the excluded services such as hotels, laundries, cleaning, hairdressing, and the like, are much less developed in Soviet Russia than they are in more industrialized countries. Their exclusion from the national income in the Russian estimates is, therefore, of relatively little consequence.

How much the Soviet national income is underestimated on account of the use of the narrower concept, is therefore difficult to say. One Soviet economist, reversing the comparison, charges the other countries employing the broader concept with overestimating their national income on that score by between 25 and 30 per cent.¹⁰ However, this writer failed to account for the more complete inclusion of taxes in the Soviet income and for this and other reasons placed the differential at much too high a figure. In the absence of detailed data it is impossible to measure the degree of the underestimation of the Soviet income involved in the case. But the probability is that the underestimation is not very great.¹¹

Estimates in Current Prices. The national income is conceived strictly as the net value of the national output. It is divided into two parts: national income distributed to individuals engaged in material production in the form of wages paid therein; and the collective share of the national income consisting of profits of enterprises, net short-term interest, social levies, and taxes. The profits of enterprises and the turnover taxes are the socialist counterparts of private profits in the capitalist society and form a larger share of the national income than do profits in the capitalist societies.

In addition to the primary incomes of individuals which are a part of the national income, there are the so-called "derivative incomes" of individuals which are not, directly, a part of the national income. These incomes are earned by state employees, employees of social institutions, and other persons rendering personal services. They, too, take the form of wages and are paid out of the taxes, social levies, and primary incomes of individuals engaged in material production.

¹⁰ Kolganoff, *Narodny Dokhod*, *op. cit.*, pp. 67-71 and 80-81.

¹¹ For a fuller discussion of the Soviet concept of national income, see Paul Studenski, *Methods of Estimating National Income in Soviet Russia*, *Studies in Income and Wealth* (New York: National Bureau of Economic Research, 1946), Vol. III.

They are treated as parts, not of the original distribution of the national income, but of its subsequent redistribution.

Whereas in the capitalist countries using the comprehensive production concept national income generally is somewhat in excess of the total income payments to individuals inasmuch as it includes undistributed profits, in Soviet Russia with its restricted national income concept the reverse holds true. The sum of individual primary and derivative incomes, which consists of wages, has been estimated to be 10 per cent or more in excess of the national income total.¹²

National income in Soviet Russia is computed by the net output method. Net output, in current prices, in the case of agriculture, construction industry, trade, and small-scale industry is derived from gross output by deducting from it material costs. These embrace expenses for raw materials, auxiliary supplies and services, repairs done outside, and depreciation allowances. Gross value itself is computed either from gross sales or by multiplying the quantity of goods produced by their prices. In the case of retail trade, the gross value is calculated as the proceeds of a stated markup or "gross profit" on the wholesale price of the goods. In the case of all large-scale industry and construction, however, net value at current prices is computed directly by aggregating the payment of wages, social levies, net short-term interest, profits, and taxes.¹³

Computation of National Income in Constant Prices. The crux of the Soviet estimates and also their most vulnerable point is the conversion of the national income in current prices into national income in constant prices. This conversion is made in a completely different manner from that generally followed in other countries.

In the latter, as is well known, general or specific indices of wholesale or retail prices or both are used to measure in constant prices the total national income. Sometimes, too, these indices are used to measure, in constant prices also, the values of the final products comprising the national income total in its disposition aspect. But in Soviet Russia price indices and other such devices are used to measure in constant prices the net output of each branch of production and its contribution to the national income total in its production aspect.

Widely divergent methods are used in the computation of the net outputs of different branches of production in constant prices. Their general objective seems to be to attain as nearly as possible a physical measure of the current net outputs, independent of price changes. In the pursuit of this objective, the methods employed produce widely

¹² V. Katz, *Planov. Khos.*, op. cit., pp. 126-127.

¹³ For a fuller discussion of the methods of estimating Soviet national income in current prices, see Paul Studenski, op. cit.

divergent and often odd results. Their specific operation and results can be understood only if analyzed closely.

Altogether, three main methods of conversion into constant prices are employed: one, known as the method of the "dynamics of gross output"; another called the method of the "index of the price of the product"; and the third described as the method of "direct computation of net output in constant prices." In all of these three methods, the constant prices are taken as of the year 1926-27.

Under the method of the "dynamics of gross output," the increase in the net value of the output in constant prices is measured by the increase in gross value in such prices. The latter is computed by multiplying the current quantity of the output by the price of the unit of that output in the base year. Then, the ratio of net to gross value effective in the base year is applied to the figure. The resulting sum is taken to represent the net value of the current output in constant prices. For example, if 10 million units are produced in the x year, the price of the unit in the base year is 10 rubles, and the ratio of net to gross value of that product in the base year was 60 per cent, then the gross value for the current year in constant prices is set at 100 million rubles, and the net value in constant prices at 60 million rubles.

This method was introduced originally in the national income computation for the years 1925-30. It is still employed today in the case of certain branches of production, such as freight transport, retail trade (in part), and others. In the case of transport, it is applied in a simplified form. The net value of the services performed in carrying a ton of freight for the distance of a kilometer in 1926-27 is taken as a starting point. This sum is then multiplied by the number of ton kilometers of service performed in the current year. The result is deemed to represent the net value of the service or income of the transport in the current year at constant prices.

The method is exceedingly crude. Its underlying assumption that the ratio of net to gross value of the output remains unchanged over a period of time and that the two values move together in a parallel way is contrary to fact. The ratio of net to gross value is affected by a variety of conditions and does not remain the same over a period of time. It is influenced by changes in the price of the product, changes in the costs of labor, changes in the nature, quality, quantity, and costs of materials and equipments used in production, changes in the care of handling these materials and equipments, changes in the applied rate of depreciation and in the rapidity with which capital is being amortized, and a number of other circumstances of this sort. In an industry whose production is becoming increasingly roundabout, i.e., dependent on the materials, equipments, and services of other indus-

tries, the ratio of net to gross value of the output, all other conditions remaining the same, drops over a period of time. On the other hand, in an industry in which such outlays for one reason or another decrease relatively, the ratio of net to gross value, all other conditions being the same, rises from one period to another. The computation of the increase in net value in terms of increase in gross value results, in the first instance, in an overstatement of the growth of the net output and, in the second, in its understatement.

The computation of net value of the services of transport, under the method described above, in terms of income per ton kilometer in 1926-27, ignores the changes which have taken place since 1926-27 in the composition of the freight, tariffs charged for it, costs of labor, fuel, auxiliary supplies, repairs, rate of depreciation, and a multitude of other things, and gives a very much distorted view of the real growth of the net value of the services of this branch of production.

Under the second method—that of the index of the price of the produce—the net value of the output is computed first in current prices. It is next deflated by the index of the price of the finished product. For example, if the price of the product has doubled, the net value of the output in the course of its conversion into constant prices would be cut in half; if the price decreased 50 per cent, the net value in the course of the conversion would be increased 100 per cent. It is not stated clearly in Soviet literature in which particular branches of production this method is employed today. It was used as an alternative method in the 1925-30 calculations. It attempts to reflect changes in the ratio of net to gross value and thus to avoid the distortions caused by the first method. It is faulty, however, in its assumption that the net value of the output changes in exactly the same manner as the price of the product. Many other factors, as already stated, produce these changes. The method produces often unrealistic results.

Under the third method, that of the “direct computation of net value in constant prices,” the net value is computed as the difference between the gross value of the output in base year’s prices and the costs of materials in base year’s prices. This method is used extensively in the computation of income from agriculture and apparently also in certain other cases as well and is theoretically correct if applied to a true final value of the product. But it may lead to overestimation, if the values of intermediate products are duplicated.

All the three methods of estimating the net output in constant prices lead to a distortion of the structure of the national income according to branches of production and, probably, to an overestimation of its aggregate to an unknown degree. Moreover, even more responsible for a possible exaggeration of the national income in constant prices are

certain departures in the estimates from the application of these prices. Several Russian authorities have pointed out that in important instances the estimates rest not upon 1926-27 prices but upon the generally higher prices of the current year, or of some other later year than 1926-27. This is the case for building construction, retail trade (in part), and those segments of industry which produce new articles not produced in 1926-27.

In the building industry base year prices scarcely exist. Each new construction project has its peculiar features and hence costs. Accordingly, conversion of net output into constant prices under any of the methods described scarcely can be carried out in its case.¹⁴ The net output for that branch of production is estimated, therefore, as the difference between the gross value of the construction work done at current prices and the material costs likewise incurred at current prices.

The income from retail trade is computed partly in current and partly in constant prices. First, the gross value of goods entering trade is computed at current prices. Next, the gross value of the services of retail trade is computed therefrom by applying thereto the markup in effect in 1926-27. This is next reduced to net value, by applying to it the ratio of net to gross value in trade in effect in 1926-27. Finally, the excise taxes levied on retail sales are added thereto at the then existing percentage rates. This method exaggerates the net output in trade in a twofold way. First of all, it takes as a starting point in the computation the wholesale prices of the current year which are generally much higher than those of 1926-27. They are generally higher not only because of the higher wage and price level but also because they included packing, transportation, and delivery costs, whereas the early prices were strictly factory prices. Secondly, the method exaggerates the net output in trade by taking the 1926-27 ratio of net to gross value which was generally higher than the current ratio. It was higher because the net value in 1926-27 included the excise taxes then levied on retail trade but removed since, in 1930, and replaced by the turnover tax on industry.

One of the greatest sources of the overestimation of the Soviet national income probably is the particular method of computation of the net output in constant prices employed for industries producing articles not produced in 1926-27. In this case, prices had to be used for the later years in which the articles were first placed on the market. Not only did these prices reflect the generally higher wage costs of those years,

¹⁴ S. N. Prokopovicz suggests the use of a 1926-27 cost of construction per square foot of floor space or cubic foot content as a usable constant price, but it obviously is a highly inadequate and imperfect measure. See his *Russland's Volkswirtschaft unter den Sowjets* (Zürich, 1944), Ch. VI.

but they also often reflected the higher initial production costs of those articles associated with their initial production in small quantities and under a still imperfect technology of their production. Even though the prices and costs of these products would eventually be materially reduced as the goods are put into mass production, their net value would still continue to be evaluated in their original high prices and costs, thus producing a perpetually exaggerated figure of net value or income.

It is thus seen from this review of the existing methods of computation of the Soviet national income in constant prices, that they all, in one way or another, unwittingly tend to distort and very largely exaggerate the growth of the real national income of the country and of its several component parts.

Some of the indicated distortions, such as some of those occurring in the case of retail trade, can probably be easily corrected. But some are inherent in the rapid change of the economy and probably cannot be avoided no matter what system of price devaluation is used. There seems to be a keen appreciation among leading Soviet statisticians of the imperfections of the methods of price deflation used by them in the national income computations. But there is no agreement among them as to how these imperfections might be corrected. One authority sees a solution in a shift to the estimating of national income in terms of the final value of consumer goods and of newly added capital goods, in constant prices. He stopped short of recommending it, however, because he believed that under this approach it would be difficult to break down national income total into parts contributed by the different branches of production. Another authority suggests the conversion of national income at current prices into national income at constant prices with the aid of a unified price index, the preparation of which, he says, should be resumed at once. This method would be in accord with that used in most countries.¹⁵

Overstatements of Growth of National Income Due to Structural Changes in the Economy. On top of methodological factors, as already suggested, changes in the structure of the Soviet economy contribute to overstatements of the growth of the Soviet national income. Much of the reported increase in that income represents merely a more complete accounting of production previously carried on in the farmers' households or otherwise. It is, therefore, an increase on paper only. Thus, for example, in the course of the breakdown of the old rural household economy, considerable amount of production carried on by members of the family at home for family consumption, was taken over by the Kolhoz or was organized and classified as industrial pro-

¹⁵ Kolganoff, *Probl. Ekon., op. cit.*, p. 108, and Turetsky, *Planov. Khos., op. cit.*, p. 126.

duction. The work of millions of workers not previously accounted for in national income became suddenly so recorded therein. Workers' meals taken at the family table were replaced to an increasing degree by meals taken at the factory canteens or communal restaurants with the result that the services rendered in supplying them became a part of the national income, under the category of retail trade.

The Results of the Soviet Estimates. According to the Soviet estimates, national income of the country in 1926-27 prices increased from 25 billion rubles in 1928 to 125 billion rubles in 1940. This is a 400 per cent increase in twelve years. The last breakdown of national income in constant prices by different branches of production is given for 1937. It shows increases in their income for the nine-year period of 1928-37 ranging from 66 per cent for agriculture to 264 per cent for retail trade, 400 per cent for transport, and 485 per cent for industry.

No published estimates for any other country in the world show a comparable rate of increase of its national income during any time in its history. The only estimates published in the United States covering an extended period show that it took that country fifty years, from 1879 to 1929, to increase its national income in constant prices fivefold. Estimates prepared in Sweden, likewise covering a long period, show that it took that country sixty-two years, from 1861 to 1923, to achieve that increase.¹⁶

The Soviet economists explain this indicated unprecedented growth of their national income by the effects of the country's industrialization plans inaugurated in 1928. They emphasize particularly the great increases in the number of workers employed in material production and in the productivity of their labor, effected under the operation of these plans. It is pointed out that in 1928, at the beginning of the first five-year plan, there were still 1.6 unemployed workers; that by 1930 unemployment in the country was completely banished; and that by 1932 the number of workers employed in material production other than Kolhoz members and independent workers more than doubled. The number increased from 7.7 million in 1928 to 17.1 million in 1932 and to 18.7 million in 1937. This was an increase of 144 per cent in the number of workers employed in this major sector of the economy over a period of nine years.¹⁷

It is also emphasized by Soviet economists that during the years 1928 to 1937, a considerable shift of workers took place from branches of production characterized by low productivity of labor to branches

¹⁶ Robert Martin, *National Income in the United States, 1799 to 1938* (New York: National Industrial Conference Board, 1939), pp. 6 and 7; *Cost of Living and National Income in Sweden 1860 to 1930* (University of Stockholm, Institute of Social Sciences, Wages), Vol. III, pp. 4-5 and 247.

¹⁷ I. Krasnolobov, *Prob. Ekon.* (1940), No. 9, p. 55 *et seq.*

characterized by high productivity and that this shift played a part in the extraordinary growth of the country's national income during that period of time. It is pointed out that industrialization in Soviet Russia, under the five-year plans, was carried out along completely different lines from those it has taken in the capitalist countries. Unlike in the latter, industrialization in Soviet Russia is said to have started in the producer goods industries, particularly those of the extractive type, such as coal, steel, cement, petroleum, etc. The development of the consumer goods industries was designedly held back. This peculiar orientation, conceived and carried through by government, say the Soviet economists, has had the effect of increasing the productivity of labor much faster than would have otherwise been the case, inasmuch as production in the producer goods industries is much more direct and less dependent on previously produced and stored-up labor than is the case with the more elaborative consumer goods industries. Inasmuch as the former are concerned mainly with the extraction of the products of nature and their mere elaboration into semimanufactured goods, output in those industries with the application of new labor may be increased much more rapidly than in other industries.

One (Krasnolobov) statistician attributes 43.5 per cent of the increase in income of state enterprises during the period 1928-32 to increases in the number of man-hours used in production there, while attributing 56.5 per cent of the increase to gains in productivity. He fixes the corresponding shares of the two factors in the increase in the national income for the period 1933-37 at 33 and 67 per cent respectively. He estimates the increase in productivity in large-scale industry for the period of the first five-year plan at 41 per cent and for the second at 82 per cent. However, these measurements of productivity are open to question.

Because of the peculiar nature of the Soviet industrialization program, the increase in the country's national income from 1928 to 1937 registered primarily in the supply of producer goods and not, as in capitalist countries, in the supply of consumer goods. The levels of consumption were forcibly kept down while plants, raw materials, and semimanufactured goods were piled up. The main gain from this type of increase in the national income was the country's greater preparedness for war.

The peculiarity of Soviet Russia's industrial development has tended to confuse some economists in foreign countries. Looking upon the relatively stationary character of the consumption levels of the people of the country, they were inclined to credit the country with only a slight increase in the national income. Colin Clark, the noted English economist, was somewhat guilty of this error. In recomputing the

Soviet national income for the years 1913, 1928, 1934, and 1937, he was guided particularly by what was happening in the consumption sector of the national economy and underestimated grossly capital formation.¹⁸ He showed no increase in the per capita national income of the country in constant prices, from 1928 to 1934, and only a 40 per cent increase in it from 1934 to 1937, as compared with corresponding increases under the Soviet estimates of 88 and 90 per cent respectively for the two periods.

However, even economists who are fully aware of the peculiarities of the Soviet program of industrialization and its implications are inclined to question the accuracy of the Soviet estimate of a fivefold increase in the real national income over a period of twelve years. S. N. Prokopovicz, the leading critic of Soviet statistics, while conceding a colossal rate of growth of the Soviet national income, still believes the indicated fivefold rate of increase to be a gross exaggeration.¹⁹

In the light of the examination made above of the concept of national income employed in Soviet Russia and of the methods of its computation in constant prices, the existence of considerable overstatements in the Soviet estimates appears to us to be very likely. First of all, the restriction of the concept of the national income to the material production sector of the economy, in itself, tends to exaggerate the rate of growth of the national income, inasmuch as this sector is being expanded in Soviet Russia at the expense of all the other sectors including government and so-called "immaterial" production generally. The rate of growth of production of the combined material and immaterial sectors of the economy, i.e., of the national income conceived broadly, must be considerably lower. Much of the purported growth of the national income represents merely a transfer of economic activity from one sector of the economy to another rather than a net addition thereto. Secondly, much of the reported increase in the national income generally, as already stated, is a consequence of structural changes taking place in the economy and represents merely a more complete accounting of production previously carried on under another name.

Thirdly, as shown above, the existing methods of computation of national income in constant prices involve double counting and otherwise tend to exaggerate its rate of growth.

How much as a result of these three factors the rate of growth of the Soviet national income is overestimated, it is difficult to say. One of the two authors of this paper prepared recently an independent estimate of the Soviet national income in constant prices for the years 1928 to 1940. He used for the purpose the comprehensive concept of

¹⁸ Colin Clark, *A Critique of Russian Statistics* (London, 1939).

¹⁹ S. N. Prokopovicz, *op. cit.*

national income, and the methods most generally used in national income estimates throughout the world. He arrived at only a 123 per cent increase of the national income of the country for the period in question and probably a 200 per cent increase in the income of the material production sector.²⁰

While the overestimation of the Russian national income by the Soviet statisticians can be demonstrated by a critical study of the methods and techniques applied by them, there is hardly any possibility of proving it with the aid of the income figures themselves. These figures are not sufficiently detailed to permit a thorough test of their internal consistency and accordance with actualities. The possibility of testing them by means of comparison with national income figures of other countries is precluded by the uniqueness of the structure and development of the Soviet economy:

There remains, however, one indirect and somewhat remote test of the accuracy of these figures. This is a comparison of them with those of the output of certain major industries. Some critics of Soviet statistics have attempted to apply this test. For instance, Prokopovicz contrasted a $6\frac{1}{2}$ times increase in the output of large-scale industry from 1928 to 1940 with an only 4.4 times increase in the output of iron and coal industries during the same time.²¹ Even a sharper contrast is that between a twenty-three fold increase over this twelve-year period (1928-40) in the gross value (at constant prices) of the output of the industries producing metal goods, machinery, vehicles and other transportation implements and the only $4\frac{1}{2}$ times increase in steel production and only a $3\frac{1}{2}$ times increase in copper production over the same period. Granting that the increase in the output of metal products results mainly from increased elaboration, it may nonetheless be questioned whether so great an increase in their output is reconcilable with so much smaller increase in the output of raw materials used in their production.

Prokopovicz also quotes a reported nearly sixfold increase in eight years (1927-28 to 1936) in the gross output (in constant prices) of large-scale industries, with a somewhat more than twofold increase in the number of the workers employed in such industry during that time. The difference, suggesting an increase of 142 per cent in production per worker in such industries over such short period, seems to Prokopovicz to be highly improbable, especially when considered in the light of the officially admitted wastes in many Soviet industries.²²

²⁰ Julius Wyler, "The National Income of Soviet Russia," *Social Research*, Vol. 13 (December, 1946).

²¹ Prokopovicz, *op. cit.*, p. 209.

²² S. N. Prokopovicz, *op. cit.*, p. 213. Inasmuch as according to data published by

Taking account of the reduction of working hours, this means about the same increase in productivity as shown for the entire manufacturing industries of the United States over a thirty-six year period, 1899-1935. The contrasts in Soviet statistics thus pointed out by the critics do not in themselves necessarily prove the figures to be incorrect. But they warrant inquiry into their bases.

Conclusion. We conclude from the examination of the Soviet estimates that, as now organized, they overstate the rate of growth of the Soviet national income and of its various parts, while distorting the composition of the national income and shedding little light on its distribution and disposition. In the present form they are of no use for purposes of international comparison. Some of the defects of the estimates are inherent in the material production concept of national income derived from Marxian ideology. Some are inherent in the difficulties of measuring national income in constant prices in a highly dynamic economy. Others are due to the employment of inappropriate statistical techniques. It is of utmost importance that these deficiencies be corrected.

It is also important that the preparation of estimates in current prices be resumed by the Soviet agencies and that concepts and methods be employed in their preparation which are more comparable to those employed in other lands. The informational content of the estimates should be enriched far beyond anything ever attempted in the country before. It is to be hoped that now that peace has been re-established and that Soviet Russia has assumed an important role in the world organization and in schemes of international co-operation generally, this result will be accomplished before long. Unless this is done, it will continue to be necessary for statisticians in other countries interested in the Soviet national income to recalculate it in accordance with concepts and methods generally accepted in those countries with the aid of such data as they may be able to obtain. This is, obviously, a much less satisfactory alternative.

Prokopovicz (*op. cit.*, p. 360), the net value of the output increased more than the gross value, the real gain in productivity is even understated in the above calculation which is based on the gross value of production.

SOVIET ECONOMIC RECONVERSION, 1945-46 .

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The postwar period has been a difficult yet fruitful time for the U.S.S.R. Emerging from history's most destructive war, Soviet leaders have set their people new high goals in every economic field. Much has already been accomplished, but disappointments have been many, necessitating revisions in plans prepared less than a year ago.

Understanding of the present Soviet economic situation requires comprehension of the fundamental changes caused by the war. Of all the combatants, the U.S.S.R. probably suffered the heaviest human and material losses. This fact will dominate the Soviet scene for many years. Considering human losses first, well over 10 million persons have probably been partially or entirely lost to the Russian labor force because of death, injury, or debilitating illness.² More than 1,700 cities and over 70,000 rural communities were partially or totally destroyed in the formerly occupied western areas, leaving about 25 million persons homeless. About 32,000 industrial enterprises and 98,000 collective farms suffered greater or lesser damage.³

In the eastern areas, basic changes also occurred. A Soviet economist has summarized what happened to industry:

The war required a radical reconstruction of the national economy in the interests of the country's defence. Metal fabricating plants were converted to the production of military supplies and other instruments of war technique; metallurgical plants were converted in significant measure to the output of special kinds of metal for military production; the enterprises of the light and textile industries reduced their output significantly because of the difficulties of wartime and began to produce shoes and fabric primarily for the army, etc. The entire system of material-technical supply was adapted to the needs of war, to the task primarily of guaranteeing the supplies of the front, war industry, and the branches of heavy industry related to it.⁴

Two main results followed: First, industrial output rose very sharply in the eastern areas, partly because of the re-establishment there of factories shifted from the west and partly because of the construction of new metallurgical and metal fabricating plants. During the period 1941-45, total industrial output increased 260 per cent in the Urals and 180 per cent in Siberia, while production of metal-fabricating

¹ The preparation of this paper was made possible by a Social Science Research Council Fellowship.

² Official Soviet statements cite 7 million persons irretrievably lost. To them must be added the unknown large number of individuals invalidated or crippled by wounds or illness.

³ These data are highlights from the September 13, 1945, report of the Extraordinary State Commission formed to investigate German destruction.

⁴ G. Kosyachenko, "Preduprezhdeniye Disproportsii v Narodnom Khozyaistve—Odnazh Vazhnishikh Zadach Planirovaniya" (Preventing Disproportions in the National Economy—One of the Most Important Tasks of Planning), *Planovoye Khozyaistvo*, No. 4, 1946, p. 8.

plants increased twelvefold in Western Siberia and sixfold in the Urals.⁵ Second, civilian living standards sank rapidly as the supply of food and consumers goods decreased greatly. In addition, crowded housing conditions, a severe problem in the prewar U.S.S.R., became even worse as millions of refugees and new workers crowded into the expanding eastern industrial cities.⁶

After victory, the Soviet people undoubtedly looked forward to reaping tangible benefits in the way of increased supplies of food and consumers goods and alleviation of the housing scarcity. To the Soviet leaders, however, the primary postwar task was to renew the mighty prewar effort aimed at increasing Soviet economic strength. To do this, a new five-year plan for 1945-50 was adopted, intended, in Stalin's words, "to rehabilitate the ravaged areas of the country, to restore the prewar level in industry and agriculture, and then to surpass this level in more or less substantial measure." To reassure the Soviet people that their consumer needs were not being overlooked, Stalin added, "the rationing system will shortly be abolished, special attention will be devoted to extending the production of consumers goods, to raising the living standards of the working people."⁷

Further details of the postwar economic program were given by the Fourth Five-Year Plan published last March, and by accompanying statements in the Soviet press. Among the most important of these was the announcement that by 1950 it was expected that all the damage in the former occupied area would be liquidated so that 1950 industrial output there would be 15 per cent higher than the prewar level.⁸ Further, the new plan made it clear that continued expansion of industry in the east would be carried on simultaneously with western reconstruction. Most cheering to consumers in the urban areas was the plan's categorical assurance that rationing of bread and cereal foods would end in the fall of 1946 and that the entire rationing system would terminate in 1947.

The U.S.S.R. embarked upon this new program handicapped by its war losses, but fortified by the gains of victory. Internally, its production level was well below the prewar mark, although the metal fabricating industries had been maintained at a relatively high level. Soviet capital equipment—machinery, farm equipment, railroad rolling stock, and the like—had deteriorated greatly during the struggle. Finally, the Soviet people were extremely tired. On the other hand, peace meant

⁵ *Pravda*, August 28, 1946, and Kosyachenko, *op. cit.*, p. 10.

⁶ Cf. the accounts by various Americans who were in the U.S.S.R. during the war, including the books of Harrison Salisbury, Henry Cassidy, Henry Wallace, William L. White, Walter Graebner, and Ella Winter.

⁷ Quoted from Stalin's speech of February 9, 1946.

⁸ *Pravda*, April 4, 1946.

that millions of men could be returned from military to civilian occupations. Moreover, victory had undoubtedly heightened morale and confidence in Communist leadership among the masses—important elements in creating the psychological atmosphere needed for the difficult new tasks.

Externally, triumph in Europe opened to the Soviet regime the resources of all occupied Eastern Europe as far west as the German provinces beyond the Elbe. In Asia, Japan's defeat brought Soviet occupation of Manchuria and Northern Korea. The Soviet Union helped itself liberally to the capital equipment, food, and consumers goods found in the areas occupied by the Red Army. Claiming the right to reparations, to take back stolen Soviet property, and to seize war booty, Soviet authorities sent to the U.S.S.R. billions of dollars worth of machinery, livestock, railroad equipment and other commodities needed to help rebuild what Axis troops had destroyed.⁹

Perhaps even more important in the long run, military hegemony over Eastern Europe and consequent political developments have won the U.S.S.R. economic concessions and rights of the first magnitude there. For the foreseeable future, it seems likely that the economy of Eastern Europe will be co-ordinated closely with the Soviet economy. This gives the U.S.S.R. access to additional important quantities of manpower, natural resources, industrial capacity, and food which are already being used to ease Russian difficulties. Soviet export of raw cotton to Poland and Rumania for manufacture into cloth and subsequent reshipment to the U.S.S.R. is illustrative.¹⁰ Outside the areas of immediate Soviet military control, the increased prestige and power of the U.S.S.R. in the new balance of international forces has facilitated Soviet trade with many nations, the most conspicuous example being the recent Swedish loan which should be of considerable aid to future Soviet economic development.

A legacy of the military victory, too, is the force of perhaps five million or more former Axis soldiers and civilians now involuntary

⁹ The most comprehensive statements of Soviet takings are: the State Department note of July 23, 1946, to the U.S.S.R. regarding Hungary; the summaries of Soviet acquisitions in the Balkans in the *New York Times*, August 2 and 19, 1946; and the Pauley Report on Manchuria published December 14, 1946. In this connection, the Soviet note on Hungary, published August 2, 1946, should be consulted for the U.S.S.R.'s point of view.

¹⁰ Soviet economic gains in Rumania and Hungary include partial Soviet ownership and virtually complete Soviet control of joint companies exploiting those countries' most important natural resources and transportation facilities. In Poland and Czechoslovakia, the establishment of politically allied governments assures that future planning of those economies will be in close collaboration with the U.S.S.R. Russian exploitation of the Soviet zone of Germany and Austria will undoubtedly continue as long as the Red Army remains in those areas. Important Soviet economic gains have also been made in Finland, Bulgaria, and Yugoslavia. The development of the specially favored Soviet position in these economies has been fully reported during 1945 and 1946 in the *New York Times*, *New York Herald-Tribune*, and *Christian Science Monitor*.

laborers in the U.S.S.R.¹¹ Even though the efficiency of many of these workers is low, in the aggregate they represent an appreciable accretion to the Soviet labor force.

There can be little doubt, however, that the great bulk of Soviet economic expansion is being accomplished with domestic labor and resources. An over-all view of the magnitude of the resource shift from war to peace is given by comparison below of certain budgetary expenditures (planned) for the last full year of war, 1944, and the first full year of peace, 1946:

TABLE I
PLANNED SOVIET BUDGET EXPENDITURES FOR DEFENSE AND CHIEF BRANCHES
OF THE NATIONAL ECONOMY, 1944 AND 1946
(billions of rubles)

	1944*	1946	Per Cent Change 1944 to 1946
Defense	128.4	72.2	-44
Industry	24.7	63.8	+159
Agriculture	7.2	12.6	+75
Transportation and communications	6.3	10.8	+70

* Actual 1944 expenditures did not differ greatly from the planned goals.

Sources: *Moscow News*, January 29, 1944, and *Pravda*, October 16, 1946.

Since budgetary appropriations for the national economy are utilized largely to finance new capital construction and to increase working capital, the data in Table I show clearly how the war's end has permitted substantial reallocation of resources from military needs to the reconstruction tasks now facing the Soviet economy.

In assessing the postwar achievements of the Soviet economy, the outstanding fact is that in the main reconversion was completed in 1946.¹² In the formerly enemy-occupied western areas, productive capacity was increased 28 per cent in 1946 as compared with 1945, output of iron, steel, and rolled steel increasing by about 60 per cent, and of Donbas coal by about 30 per cent as compared with 1945. All this rise in production and capacity was due to the restoration and rehabilitation

¹¹ A report in the Soviet newspaper, *Irkutsk Pravda*, asserted that 2.8 million war prisoners were working on a new Siberian railroad. (Cf. A.P. dispatch from Shanghai dated December 16, 1946.) Probably over a million additional former enemy soldiers are employed in other occupations from western Russia to Vladivostok, as indicated by frequent references to their presence in the reports of postwar American visitors to different areas of the U.S.S.R. In addition, other reports in the past two years have told of the deportation for labor in the Soviet Union of large numbers of persons of German origin from Rumania, Hungary, and Yugoslavia, as well as from Germany itself. An undetermined number of Japanese civilians have also been reported as working for the Soviet Union in the Kurile Islands, Southern Sakhalin, and the Far East. After this paper had been delivered, a statement by the Soviet news agency, Tass, declared that as of March, 1947, only 900,000 German prisoners of war remained in the U.S.S.R. while more than a million others had been repatriated. (Cf. *New York Herald-Tribune*, March 15, 1947.) This suggests that either the estimate made in the text above, on the basis of an earlier Soviet statement, is too high or the Tass figure quoted here is an understatement. In the absence of fuller information, no decision can be made as to which of these alternatives is correct.

¹² *Izvestiya*, January 7, 1947.

of plants destroyed and damaged during the war. In the eastern regions never reached by the Germans, many new plants were put into operation. In the U.S.S.R. as a whole, 800 government enterprises were put into operation during 1946, including both restored and new plants. Among the most important installations were 6 blast furnaces, 18 open hearth furnaces, 9 rolling mills, 1 blooming mill, 11 coking batteries, 36 large coal mines, and 117 power station turbines.¹³

Gross industrial output in the Soviet Union, however, may have been lower in 1946 than in 1945. The only comprehensive production statement issued by the U.S.S.R. is the assertion that civilian output in 1946 was 20 per cent higher than in 1945.¹⁴ But since the great bulk of 1945 production was undoubtedly intended for military use, the 20 per cent civilian output increase during 1946 may not have been sufficient to offset the sharp decline in military output which took place as Soviet industry reconverted. And since the output of grain, sunflower seed, and sugar beets was also considerably lower in 1946 as the result of drought conditions, the hypothesis stated above regarding gross industrial output suggests that 1946 Soviet national income (in constant dollars) may also have been below the 1945 level.

The 1946 economic plan was fulfilled in many respects but not altogether, as is indicated by the data in Table II:

TABLE II
PERCENTAGE OF 1946 PLAN FULFILLMENT BY SOVIET INDUSTRIAL MINISTRIES*

<i>Ministry</i>	<i>Per cent of 1946 plan fulfilled</i>	<i>Ministry</i>	<i>Per cent of 1946 plan fulfilled</i>
Ferrous metallurgy	99.5	Lathe building	98.0
Nonferrous metallurgy	99.0	Agricultural machine building	77.0
Western coal industry	105.0	Transport machine building	81.0
Eastern coal industry	97.0	Machine and instrument building	98.0
Southern and western oil industry	103.0	Construction materials	105.0
Eastern oil industry	105.0	Forestry	98.0
Power stations	99.7	Cellulose and paper industry	109.0
Chemical industry	105.0	Rubber industry	96.0
Electrical industry	106.0	Textile industry	103.0
Industrial enterprises of communication	103.0	Light industry	99.6
Heavy machine building	105.0	Meat and dairy industry	110.0
Automobile industry	92.0	Food industry	98.0

* Source: *Pravda*, January 21, 1947.

This tabulation indicates clearly that while the industries producing industrial raw materials virtually all reached their goals, there was serious backwardness and nonfulfillment of plan by vital fabricating industries, particularly those producing various types of machinery. This failure to produce adequate quantities of machines and machine tools has un-

¹³ *Pravda*, January 21, 1947.

¹⁴ *Ibid.*

doubtedly held back the equipping of new plants and the replacement of obsolete and wornout equipment.

Increases in production of specific items in 1946 over 1945 are given in Table III:

TABLE III

PERCENTAGE GAIN OVER 1945 IN OUTPUT OF SPECIFIC COMMODITIES IN THE U.S.S.R., 1946*

<i>Per cent gain over 1945</i>		<i>Per cent gain over 1945</i>	
<i>Commodity</i>		<i>Commodity</i>	
Pig iron	12	Trucks	38
Steel	9	Steam turbines	30
Coal	10	Tractors	72
Oil	12	Combines	349
Electric power	10	Cement	83
Locomotives	2,900	Brick	89
Freight cars	2,800	Cotton cloth	17
Meat	18	Leather shoes	28
Animal fats	69	Fish	10

* Source: *Pravda*, January 21, 1947.

The data above show that the failure of the metal-fabricating ministries to fulfill their 1946 plans was the result in large part of the ambitious level of their goals, since nonfulfillment occurred despite very substantial increases in output of such items as trucks, turbines, tractors, etc. The very large percentage gains recorded in some particular items, such as locomotives and combines, undoubtedly reflect the extremely small production of these commodities in 1945. In many of the items enumerated, much of the progress achieved was the result of reconversion from military output.

Valuable as they are, however, the above summary data partially obscure certain important weaknesses in Soviet industry. For one thing, these data do not reflect the tendency of Soviet industry to overproduce certain items whose output is relatively simple and to neglect other vital items which are more difficult or less profitable to produce. Second, these data do not reflect adequately the differing significance of the percentage increases for commodities whose production was expanded or curtailed during the war. Third, certain types of important economic activity, particularly construction, are carried on by sections of the ministries whose record is given in Table II, and the differential success achieved in these ancillary but vital economic areas is not properly represented in the summary data. To present a more balanced picture of Soviet economic progress during 1946, therefore, the problems encountered in construction, machine building, and consumers goods output will be considered in some detail below.

Both industrial plant and housing construction lagged behind Soviet plans in 1946. During the first six months, the annual plan for construction of heavy industrial enterprises was fulfilled only 40 per cent,

with the situation worst at sites of automobile, ferrous metallurgy, and heavy industry plants where only 10 to 35 per cent of the annual plan had been met.¹⁵ In October, only 47 of the 109 trusts of the Ministry of Heavy Industry Construction fulfilled their plans.¹⁶ As regards housing, *Pravda* recently noted that "in the majority of places the construction of new dwellings is being carried on unsatisfactorily."¹⁷ In the first eleven months of 1946, a number of important industrial ministries fulfilled substantially less than half of their 1946 housing construction plan. Progress of new housing in the Donetz, Kuznets, and Moscow coal basins has been particularly condemned as inadequate.¹⁸

Construction difficulties are apparently the result of disorganization of the industry, retention of antiquated methods of work, and of shortages of necessary machines, men, and materials. The degree of disorganization is suggested by the fact that at the beginning of 1946 over 40 per cent of all construction was being done on projects for which no cost estimates had been prepared. About half of all construction work is done by hand, and the available labor is used inefficiently, skilled workers often being employed at unskilled tasks.¹⁹ The shortage of materials is so great that local authorities have been warned they cannot depend on the production of large government plants to meet their needs, but must organize local production of all building materials, including glass, cement roofing materials, and ceramic products.²⁰ This is particularly significant in view of the overfulfillment of the total 1946 plan by the Ministry of Construction Materials.

Serious inadequacies have marked progress of the vital machine industries in this period, as is evident from the data in Table II. Conversion of the plants formerly engaged in armaments production to peacetime output was frequently very slow, despite the fact that the chief ministries involved coped successfully with the analogous problems of conversion to war output during the conflict.²¹ Soviet plants accustomed to produce a very limited number of military items often showed little flexibility in adjusting themselves to the problems posed by peacetime demands that they produce a much wider assortment of machines and equipment for many different industries. Plant executives

¹⁵ *Trud*, August 23, 1946.

¹⁶ *Izvestiya*, December 8, 1946.

¹⁷ *Pravda*, October 21, 1946.

¹⁸ *Izvestiya*, December 8, 1946, and *Pravda*, October 4, 1946, and January 20, 1947.

¹⁹ V. Grossman, "Ob Ukreplenii Rezhim Ekonomiki v Stroitelstve" (Strengthening the Regime of Economy in Construction), *Planovoye Khozyaistvo*, November 3, 1946, pp. 37, 40.

²⁰ *Pravda*, September 6, 1946.

²¹ For example, most of the former tank industry was converted to locomotive production, while the former Commissariat of Military Supplies was put in charge of agricultural machinery production.

have been hampered by the cumbersomeness of higher echelon Soviet bureaucracy which has often been unable satisfactorily to solve the problems of new machine tool procurement, revision of materials flow channels, and retraining of workers.²²

As a result of these deficiencies, Soviet output of vital machinery during 1946 often fell behind plans and needs with respect to quantity, assortment, and quality. Thus *Pravda* sharply criticized the electrical equipment, ball bearing, and agricultural machinery industries for their backwardness, accusing many plant directors of underestimating reconversion difficulties. The journal pointed out that new plant machinery would not appear by itself but would have to be constructed by the factory needing this machinery in many cases.²³ Low output of precision instruments was described as having produced a "tense situation" in many electric power stations and iron, steel, and nonferrous metal plants.²⁴ According to *Izvestiya*, inadequate production of electrical equipment "serves as a brake on the mechanization of labor and the electrification of technological processes."²⁵ Perhaps most serious of all, the extremely backward record of the agricultural machinery industry has seriously hampered Soviet plans to remechanize agriculture and release farm workers to industry.

Published accounts of conditions in the farm equipment industry are illuminating. The basic cause for nonfulfillment of production plans for all major types of farm machinery during the first half of 1946 is given as the lag in reconstruction of prewar plants in the occupied area and in the construction of new plants in the east. Plants in process of conversion were seriously handicapped by lack of the machines they needed.²⁶ Lack of co-operation between different farm machinery plants has been another obstacle, with some factories standing idle for lack of machines which other plants had in abundance and did not use.²⁷ At the giant Chelyabinsk tractor plant, converted to tank output during the war, reconversion did not begin until April, 1946. Its first tractor was not assembled until June and not until August were the first five machines ready for shipment.²⁸

Long a laggard in the prewar era, consumers goods production has held the same status more recently. The relatively low percentages of output gain in 1946 shown in Table III exacerbate a situation made

²² Cf. *Izvestiya*, May 26, 1946, and August 21, 1946.

²³ *Pravda*, October 28, 1946.

²⁴ *New York Times*, November 18, 1946.

²⁵ *Izvestiya*, January 7, 1947.

²⁶ *Pravda*, August 9, 1946.

²⁷ P. Nikitin, "Mashinostroeniye i Razvitiye Tekhniki v Novom Pyatiletnem Plane" (Machine Construction and Technical Development in the New Five Year Plan), *Plany i Khozyaistvo*, No. 4, 1946, p. 29.

²⁸ *Pravda*, December 18, 1946.

desperate by the curtailment of consumers goods production during the war and allocation of virtually all such goods to the army until victory was won. All through 1946, apparently, this type of output was given low priority by local officials who gave preferential treatment in resource allocation to other industries.²⁹ During the first six months of 1946, therefore, only about 40 per cent of the half-year planned output of shoes, knitted clothing, stockings, and socks was obtained.³⁰ Despite this, Table II shows that light industry almost fulfilled its goal, suggesting that production of other consumers goods exceeded plan and made up for the deficiencies in this output.

The low level of current consumers goods output may be illustrated by data on several important items for which 1946 output may be estimated with reasonable accuracy:

TABLE IV
TEXTILE OUTPUT IN THE U.S.S.R., 1938 AND 1946*

Commodity	Unit	1946	1938
Cotton cloth	million meters	1,900	3,491
Woolen cloth	million meters	70	114
Silk cloth	million meters	45	59
Cotton thread	thousand tons	500	831

* Sources: 1946 output estimated on basis of nine months data in *Pravda*, October 18, 1946; 1938 data are preliminary figures from *Sotsialisticheskoye Stroitelstvo SSSR 1933-1938* gg. (Socialist Construction in the U.S.S.R., 1933-1938), Moscow, 1939, p. 73.

The low relative level of 1946 output is emphasized when it is recalled that the 1938 data are for the smaller area then included in the U.S.S.R. With output so low, little wonder *Izvestiya* recently denounced the Ministries of Textile and Light Industries which do "not satisfy the requirements of the population in cloth, shoes, and knitted goods."³¹

To improve the supply and quality of consumers goods, Soviet authorities have recently taken drastic steps. In November, producers co-operatives were ordered to increase their production. They were freed from the obligation of filling industrial orders, and directed instead to devote all their resources towards meeting the population's needs. Unutilized materials and equipment belonging to the government were placed at their disposal. Additionally, they received the right to sell their output to consumers at free market prices, provided only that these were not higher than the relatively expensive levels in the government commercial stores. To finance their expansion, the co-operatives were given a large government loan. Incentive for expansion was provided by permitting the co-operatives to distribute 20 per cent of their profits among their members, something they had not been allowed to do before, and by granting them exemptions from particular taxes.³²

²⁹ *Izvestiya*, December 28, 1946.

³¹ *Ibid.*, December 28, 1946.

³⁰ *Ibid.*, October 17, 1946.

³² *Ibid.*, November 12 and 14, 1946.

In some respects this new policy is reminiscent of Lenin's new economic policy after World War I, when the Soviet government first turned to the use of profit incentives to stimulate private and co-operative production. That this move represented a change in plans was emphasized by editorials in the Soviet press castigating co-operatives which did not immediately alter their old plans to take account of the new government instructions.

The seriousness of current consumers goods shortages was still further emphasized by additional drastic measures taken late last December to raise output in government plants. A decision of the Council of Ministers increased considerably the amount of capital to be invested in the textile and light industries, and ordered unconditional satisfaction of these industries' requirements of fuel, electric current, and building materials so that they might expand output. Local officials throughout the country were severely criticized for giving low priority to consumers goods output, and were ordered to mend their ways.³³ These drastic measures suggest the severity of the situation produced by the continued low Soviet standard of living fifteen months after V-J Day.

While many factors are involved, the primary difficulty straining the Soviet economy today seems to be the quantitative and qualitative inadequacy of the U.S.S.R.'s labor force compared with the ambitious goals first set. Aggravating the situation has been the low productivity of much of the available labor supply, many of whose members have received but little vocational training and many of whom are working on wornout machines that break down frequently and cannot be operated for long at maximum capacity. As a result, many enterprises have succeeded in restoring their work force to the prewar level but produce significantly less than prewar because of low labor productivity.³⁴ Poor management is also a factor, many enterprises being unable to maintain an even flow of work with the result that their executives drive men and machines at a frantic pace the last days of each month to meet government goals.³⁵

Labor efficiency is held down by high turnover rates in many areas where food and housing are unsatisfactory. This conclusion is suggested by much Soviet press comment blaming poor living conditions for low productivity. In various Leningrad machinery plants, for example, from 89 to 120 workers left their jobs during the first nine months of 1946

³³ *Ibid.*, December 28, 1946.

³⁴ *Pravda*, October 13, 1946.

³⁵ *Ibid.*, July 15, 1946, and January 2, 1947.

for every 100 workers hired by those plants.³⁶ While these data are probably much higher than the average for Soviet industry, the seriousness of the turnover problem is suggested by the decision of the All-Union Central Committee of Trade Unions last summer requiring local union organs to renew vigorous enforcement of labor registration regulations first imposed in 1938 to minimize worker shifts from plant to plant. This registration control, effectuated through labor books, broke down during the war and demobilization years. That a very large number of workers did not have labor books at all is shown by the fact that last summer such unregistered workers aggregated 200,000 in iron and steel plants alone.³⁷

Three million workers were added to the Soviet labor force in 1946 as the result of reduction in the armed forces. Four large-scale demobilizations took place in 1945 and 1946. Demobilization was not rapid enough during the early part of the postwar period to solve the Soviet labor problem. It is most significant, therefore, that the fourth and most recent demobilization last fall was reported to be the largest in terms of the number discharged.³⁸

Seven hundred thousand production workers were gained by the vigorous campaign waged to reduce administrative and clerical staffs so that additional labor may be shifted to actual productive work. Both propaganda and direct administrative action have been used to facilitate this shift of occupations.³⁹ In the Ukraine, and perhaps in other areas too, collective farm workers have been shifted temporarily to mine and construction work, but it is dubious that this can be a major source of year-round additional labor until farm machinery is much more abundant on Soviet farms than at present.⁴⁰

In addition to the over-all labor shortage, the postwar Soviet economy has been particularly harassed by the lack of skilled workers and specialists. In part, this has been an absolute shortage resulting from the losses of skilled workers during the war and in part the U.S.S.R. has been hampered by poor geographic distribution and less than full utilization of the supply of skilled workers and specialists. To increase the supply of skilled workers for the future, the System of State Labor Reserves, originally set up as an emergency defense measure in 1940, has been made permanent. During 1946 two large drafts were made of

³⁶ *Loc. cit.*

³⁷ *Pravda*, July 27, 1946.

³⁸ *Ibid.*, January 21, 1947, and *Krasnaya Zvezda*, November 13, 1946.

³⁹ *Trud*, October 22, 1946.

⁴⁰ Cf. Drew Middleton's dispatches in the *New York Times* during September, 1946, and *Pravda*, November 25, 1946.

young people conscripted or volunteering to take vocational training. The number entering these schools in 1946 was undoubtedly well over 500,000.⁴¹ Much less important numerically, but giving some help immediately, has been the Soviet importation of skilled German workers to assist in overcoming the lack of trained Russian specialists.⁴²

In order to utilize the available supply of skilled workers and specialists more productively, the Soviet government has sought to reallocate these workers both functionally and geographically. Initially it initiated a wide campaign to get these trained personnel out of administrative and office positions into actual productive work in the mines, fields, and factories.⁴³ In addition, a resolution adopted recently by the Central Committee of the Communist Party demands shifts of specialists from the central areas of the U.S.S.R. to the eastern industrial regions where they are badly needed.⁴⁴ No doubt early action will be taken to effectuate this resolution.

The Soviet government has taken a number of important steps designed to increase worker productivity by improving labor conditions and linking increased productivity with increased remuneration. A decree last August raised wages 20 per cent for workers in key industries of the Urals, Siberia, and the Far East, and also appropriated large funds to build additional housing in these areas.⁴⁵ Soviet domestic propaganda has laid great stress upon socialist competition between plants and industries, and the examples of highly productive Stakhanovite workers have been put before the Soviet people for emulation. The efforts to increase housing construction and consumers goods output are probably also motivated by a desire to reduce worker discontent and heighten morale as a preliminary to increased productivity. The Director's Fund—a portion of each plant's profit which is made available to the director for distribution in the form of bonuses and improvement of worker living conditions—has been reinstated after a lapse during the war years.⁴⁶ This is undoubtedly intended to increase worker interest in reduced costs and increased profits, both attainable through higher productivity. As reconversion progresses and more of the necessities of life become available to the Soviet people it is quite likely that productivity will rise, but to date the measures taken have not yet re-

⁴¹ *Moscow News*, May 22, 1946, and *New York Times*, November 12, 1946. It should also be noted that energetic steps are being taken to improve the training given in these schools which has often been inadequate in the past. Late last year it was noted that 40% of the teachers and 20% of the directors of these schools did not have adequate training. *Pravda*, November 15, 1946.

⁴² *New York Herald-Tribune*, November 28, 1946.

⁴³ Cf., for example, *Sotsialisticheskoye Zemledeliye*, December 8, 1946.

⁴⁴ *Pravda*, December 27, 1946.

⁴⁵ *Ibid.*, August 27, 1946. The official reason given for this move was the necessity of compensating these workers for the rigors of the eastern climate.

⁴⁶ *Planovoye Khozyaistvo*, No. 3, 1946, p. 11.

sulted in sufficiently raising output per worker to meet current needs.

Although there is no space here to treat the subject adequately, it should be noted that difficulties in Soviet agriculture during 1946, particularly crop failures resulting from drought, also played a significant role in throwing the Soviet economy behind original schedules. The drought was given as the official explanation for the nonfulfillment of original plans to end bread and cereal rationing during 1946.

It is clear from the above review that the reconversion period has been both a productive and difficult time for the Soviet economy. As a result of last year's drought and slower than anticipated growth of production in some areas of the economy, the burden borne by the Soviet people since before the war has been lightened but little. Nevertheless there seems little reason to expect fundamental changes in the objectives of Soviet economic development, though, as has already occurred, the pace may be slowed to meet particular exigencies. Zhdanov's speech of November 7, 1946, warned the Soviet people of the sacrifices they must expect to make to achieve the state's program. So long as the present regime retains political power, those sacrifices will be made.

RUSSIA AND THE INTERNATIONAL TRADE ORGANIZATION

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The main purpose of this paper is to discuss those provisions of the International Trade Organization charter¹ which have relevance to Russia. In addition something will be said about certain broad problems of Russia's foreign economic development in their relation to the I.T.O. It cannot be gainsaid that, at this writing, the probability of Russia's early adherence to the I.T.O. does not appear too great. Russia has failed so far to join the International Monetary Fund and the International Bank for Reconstruction and Development. Even more significantly, it has refused to take part in the preliminary work for the I.T.O. The Preparatory Committee of the International Conference on Trade and Employment met in London in October-November, 1946, with Russia invited but absent. This is hardly encouraging. Nevertheless, I submit, the problem of Russia's reintegration into the world economy is of such a stupendous moment that a discussion of the charter on the assumption of Russian membership seems justified even in default of current urgency.

I *The Problem*

The guiding principle of the charter is familiar: expansion of international trade on a nondiscriminatory basis. Familiar also is the proposed implementation: reduction of tariffs, and proscription of, or at least severe limitation on, the application of quantitative trade controls such as quotas, licenses, exchange controls. Should tariffs once more become the paramount form of regulation in international trade, and should these tariffs be substantially lowered, then not only would the degree of protectionism be diminished, but also the most-favored-nation treatment would be reinstated in its old role as an instrument of generalization of such tariff reductions as are granted. This outcome, however, as is fully realized by the authors of the charter, would be impaired and impeded to the extent that private monopolistic organizations or state-trading monopolies were permitted to restrict trade and to conduct it on a discriminatory basis. The question of private monopolies is only very indirectly related to the subject matter of this paper. Regarding state trading, it is only with reference to Russia that the problem is to be examined.

¹ In the following the provisions of the charter are quoted in the form in which they were agreed upon in London, with the exception of those provisions on which no agreement has been yet reached. These are quoted according to *Suggested Charter for an International Organization of the United Nations* (Department of State), September, 1946.

In the terminology of the charter, Russia has a "complete monopoly of foreign trade." There was indeed a period in the history of the Soviet foreign trade monopoly when it showed some loopholes; there was even a moment when the abolition of the system was vigorously discussed in the ruling circles. But this was more than two decades ago. The government now buys and sells *everything* that enters or leaves the country, and it does so, within a range of flexibility, in accordance with a general economic plan. The foreign trade monopoly is an integral part of the planned economy of the country. In this form the monopoly existed during the thirties, and it is in this form that it doubtless exists today and will continue to exist during the foreseeable future. This has an important implication. No one can in good sense suggest the abolition of the Russian foreign trade monopoly; this would be tantamount to suggesting an abandonment by the Russians of their type of centralized planned economy. If Russian membership in the I.T.O. is desirable, the foreign trade monopoly must be taken for granted. The problem is to explore the possibilities for creation of an institutional framework within which the *policies* of the foreign trade monopoly would be consonant with the guiding principles of the charter. These policies should be such as to guarantee an expansion of Russian trade and elimination, or at least reduction to a minimum, of discrimination in that trade. In other words, the effect in Russia should be the same as that of tariff reductions plus most-favored-nation treatment in other countries. For a better understanding of the problem it may be useful to review briefly the nature of the commercial agreements concluded during the interwar period between Russia and certain other countries.

II. *Past Experience*

It is fair to say that the first commercial treaties concluded by Russia upon her reappearance in international markets in the twenties differed little from conventional pre-1914 agreements. The Russo-Italian treaty of 1924 is a case in point. In this treaty both parties accorded most-favored-nation treatment with respect to tariff duties. Clearly, Russian exports benefited from this and similar arrangements. Difficulties arose, however, in connection with other countries' exports to Russia. This calls for a word on the Russian tariff system.

Despite the existence of the foreign trade monopoly, Russia has a system of tariff duties. The Soviet tariff was first introduced in 1922, at which time it was based upon the rather complex pattern of the pre-1914 tariff, although with some modifications. This tariff was amended in 1924 and 1927, and then replaced, in 1930, by a greatly simplified tariff which was more in line with the general economic system of the country. The Soviet tariff was not without real function. During the

years prior to about 1927, while the foreign trade monopoly under the N.E.P. was somewhat less watertight, the tariff had some minor protectionist effects. These, however, became negligible with the beginning of the five-year plan period. Thereafter, although to a diminishing extent, the tariffs served a purpose in the government accounting system by providing a simple instrument for transferring to the treasury excessive profits of the government import organizations. Beyond that the existence of the Russian tariff system provided the Russian government with a convenient and innocuous *quid pro quo* for use in its negotiations of commercial agreements with foreign countries. The privilege of being accorded most-favored-nation treatment by Russia may have preserved at least some vestiges of its traditional significance in the early twenties, as long as Russian co-operative organizations remained active in foreign markets and, presumably, took into account the magnitude of the tariff duty when placing their orders abroad. Thereafter, even this slight significance disappeared.

In general, by the end of the decade it was widely understood that since tariff duties in Russia are paid by the government to the government, a reduction in tariffs by Russia (and by the same token, the most-favored-nation treatment when granted by Russia) was of little value. Russian tariff reductions did not necessarily increase the other country's exports to Russia. Nor did the most-favored-nation treatment provide any guarantee that Russia would not discriminate against the country in question. Discrimination in this context was generally, although seldom explicitly, understood to mean that, despite accordance of most-favored-nation treatment, Russian purchasing organizations might be influenced by considerations other than those which would have guided an individual trader operating within the framework of the plan but otherwise without restraint. Most-favored-nation treatment and the concept of nondiscrimination based on this treatment became meaningless without the independent "economic man" whose actions were considered nondiscriminatory by definition.

As a result, a new provision began to appear in trade agreements with Russia. Russian assurance of most-favored-nation treatment meant little. On the other hand, Russia could give what only a state-trading country had to offer. In exchange for tariff reduction and most-favored-nation treatment, it could undertake to purchase from the other country goods to a specified amount within a specified period of time. This arrangement was incorporated in a number of Russia's commercial agreements, including the series of trade agreements concluded between the United States and Russia after 1935. No most-favored-nation treatment for American goods was asked of Russia. In 1935 and 1936, Russia simply undertook to increase substantially the amount of pur-

chases in the United States, and, specifically, to buy American goods to the value of at least 30 million dollars a year; from 1937 to 1940, this amount was raised to 40 million dollars a year.

This form of agreement was at least well defined. A country which granted tariff reductions and most-favored-nation treatment to Russia under such an arrangement had exact knowledge of the *quid pro quo*. It was able to expect with confidence that the agreement would lead to an increase in its trade with Russia. It should be noted, however, that while expansion of trade was assured, the problem of nondiscrimination was evaded. In fact, a potentially discriminatory practice was recognized.

The country concluding an agreement with Russia may be highly satisfied with the quantitative stipulation; it may *feel* that it is not discriminated against. But there is no assurance either that the arrangement does not discriminate against other countries, or that the agreement country itself is not discriminated against. Discrimination against third countries will result if the obligation to buy in a certain market cannot be discharged except by buying goods which can be more advantageously had elsewhere. Discrimination against the agreement country may occur, despite the minimum purchasing commitment, if the commitment covers a smaller volume of purchases than would have been made on the basis of placing all orders in the most advantageous market.

The minimum purchasing commitment may, of course, have been determined on the basis of placing orders in the most advantageous market. In some measure it undoubtedly was so determined. But the existence of other factors must be noted. The size of the purchasing commitment is the result of a bargaining process. In this process the magnitude of Russian exports to the country in question plays a considerable role. If the country negotiating such a commitment is a large natural market for Russia's goods, its chances to press for a larger commitment are better than those of a country which has little interest in Russian export commodities. If it succeeds, therefore, in increasing the Russian purchasing commitment, such an increase may well be to the detriment of markets in other countries. The threat of the negotiating country to reduce imports from Russia (if these are products which the Russians would find it difficult to sell elsewhere) may induce the latter to agree to an unduly high commitment. The danger of discriminatory bilateralism in such agreements is obvious.

On the other hand, there is the equally obvious contingency that Russia's motivations may include political considerations. This is a general problem inherent in the Russian system of foreign trade. As is admitted in Russian literature, the record shows a number of cases in

which the Russians reduced their purchases from certain countries for political reasons. Russo-English commercial relations of the interwar period provide two examples, one in 1927 and the other in 1931. One of the purposes of a quantitative purchasing commitment was precisely to limit Russia's freedom in this respect. There was no guarantee, however, that a country obtaining such an arrangement was completely successful in eliminating political considerations: that the commitment agreed upon was not unduly large or unduly small precisely as a result of political considerations.

The foregoing is not intended as a stricture of the solutions which were attempted in the very difficult situation of the thirties, and which, it may be added, worked reasonably well. The purpose rather is to indicate how the problem which now confronts the I.T.O. charter on a comprehensive multilateral basis was faced in the past within the framework of bilateral agreements. Neither the question of dumping nor the question of monopolistic operation in the economic sense of the word has yet been touched upon because past experience in this respect is not very illuminating. I shall return to those questions briefly, however, after a discussion of the provisions of the I.T.O. charter.

III. *The Provisions of the Charter*

The provisions of the charter, as they emerged from the recent discussions in London, are still preliminary and subject to further amendments. They were submitted to the public twice before, first in the "Proposals for Expansion of World Trade and Employment" in November, 1945, and then in the "Suggested Charter" of September, 1946. The stipulations which have direct relevance to Soviet Russia are contained in Section E, Articles 31 and 33 of the charter. Article 31 bears the stamp of approval by the experts in London, except for the bracketed phrases; Article 33 is still in the form in which it was published in the "Suggested Charter." The text of the two articles follows:

Nondiscriminatory Administration of State-Trading Enterprise (Article 31)

1. If any member establishes or maintains a state enterprise, wherever located, which imports, exports, purchases, sells, or distributes any product, or if any member grants exclusive or special privileges, formally or in effect, to any enterprise to import, export, purchase, sell [distribute, or produce] any product, [and exercises effective control over the trading operations of such enterprise] the commerce of the other members shall be accorded treatment no less favourable than that accorded to the commerce of any country other than that in which the enterprise is located in respect of the purchase or sale by such enterprises of any product. To this end such enterprise shall, in making its external purchases or sales of any product, be influenced solely by commercial considerations, such as price, quality, marketability, transportation, and other terms of purchase or sale, and also differential customs treatment. The member maintaining such state enterprise, or granting exclusive or special privileges to an enterprise shall make available such information as may be appropriate in connection with the consultation provided for in Article 35.

2. The foregoing provisions of this Article relate to purchases by state enterprises for

resale. With respect to purchases by state enterprises for governmental use and not for resale, members agree to accord to the commerce of other members fair and equitable treatment having full regard to all relevant circumstances.

3. For the purposes of this Article, a state enterprise shall be understood to be any enterprise over whose operations a member government exercises effective control.

Expansion of Trade by Complete State Monopolies of Import Trade (Article 33)

Any member establishing or maintaining a complete or substantially complete monopoly of its import trade shall promote the expansion of its foreign trade with the other members in consonance with the purposes of this charter. To this end such member shall negotiate with the other members an arrangement under which, in conjunction with the granting of tariff concessions by such other members, and in consideration of the other benefits of this chapter, it shall undertake to import in the aggregate over a period products of the other members valued at not less than an amount to be agreed upon. This purchase arrangement shall be subject to periodic adjustment.

At this point a general remark may be in order. In the following paragraphs some criticism will be offered both of the wording of the articles and of the main principles. The internal consistency of the provisions will be examined and the degree to which they are open to evasion will be indicated. This, however, should not be taken as a suggestion that Russia will practice such evasion or, even less, that her basic interests are necessarily at variance with the basic idea of the charter. The writer has emphasized elsewhere² the importance of multilateralism in Russia's trade of the interwar period and tends to believe that multilateralism will be important for Russia in the future. But he also believes that an institutional framework as free as possible of ambiguous and equivocal provisions will help to prevent or at least to minimize frictions and to diminish the seriousness of disputes, and thus to facilitate the task of the I.T.O. in the field of state trading.

The text of the articles, as quoted above, shows that the charter encompasses two main ideas with regard to Soviet trade: (1) The Russians should undertake to conduct their trade exclusively on the basis of commercial considerations. (2) They should commit themselves periodically to a certain minimum amount of total imports, a so-called "global purchasing quota," to be filled over a specified period of time. The latter provision is intended to bring about an increase in the volume of Russia's imports and indirectly in that of Russia's exports, while the purpose of the former is to assure the nondiscriminatory character of this trade. Whatever critical comments may be made concerning these provisions, there is no doubt that their authors saw the twofold nature of the problem correctly and aimed at a symmetrical solution. The charter purports to provide a double *quid pro quo* on Russia's part for the benefits which Russia will derive from the reduction of trade barriers and assurances of nondiscrimination by other countries in accordance with the provisions of the charter.

The present wording of the charter contains some improvements

² Alexander Gerschenkron, *Economic Relations with the USSR* (New York, 1945).

over the original text of the "Proposals for Expansion of World Trade and Employment" which was published a year earlier. The laconic counterpart in the "Proposals" of the present Article 31, which contained no more than a bare statement of principle, has been considerably expanded. In particular, the words "state enterprise" have been substituted for "state-trading enterprise." The advantage of the new terminology is obvious. The old phrase, for example, did not necessarily include industrial enterprises in which foreign trade transactions were incidental to their main function. The change has significance for Russia in view of the fact that Russian industrial enterprises occasionally appear as buyers or sellers in foreign markets. In addition, a definition of the concept of "state trading" has been added. This is also to be welcomed, although the definition, resting as it does on "effective control," is perhaps inevitably vague. It might be preferable to have the definition extended to cover both participation and control. The relevance of these considerations to Russia may be not entirely obvious, as it may be assumed that any Russian enterprise is a state enterprise by any definition. It should be remembered, however, that Russia's participation in, or control over, private enterprises outside Russia may raise problems of definition. In this connection, the modification of "state enterprise" by the words "wherever located" should be mentioned. Apart from being pertinent to the case just referred to, the phrase makes the principle of nondiscrimination, as defined in the charter, clearly applicable to Russian enterprises abroad which are established under the laws of the country where situated, and in particular to such institutions as the joint companies which Russia has introduced in some countries in Eastern Europe.

This, however, raises a serious problem of consistency. The article stipulates that if a member maintains a state enterprise, "wherever located," "the commerce of the other members shall be accorded treatment no less favorable than that accorded to the commerce of any *country other than that in which the enterprise is located* in respect of purchases and sales by such enterprise of any product." What was intended by the words "country other than that in which the enterprise is located" is clear. Purchases and sales of a state-trading enterprise within the home country should be exempt from the provisions of the charter, so that, for instance, a state enterprise in Russia should not be bound to buy goods from abroad even if these may be had on better terms than in domestic markets. This is a realistic provision insofar as Russia is concerned. If, however, the Russian enterprise is located not in Russia but outside of Russia, the phrase "country other than that in which the enterprise is located" acquires a new meaning. To give an example: the Amtorg Trading Corporation in New York, established

under the laws of that state, in dealing with, say, Mexico and Brazil would indeed not be allowed to accord the Mexicans more favorable treatment than that accorded to the Brazilians or vice versa. But Amtorg would be allowed, under the existing phraseology, to accord United States firms treatment less favorable than that accorded to Mexico, Brazil, or any other third country.

There is another and far more serious implication. The main function of Amtorg is to buy and sell in the United States just as the main function of Arcos, Ltd., is to buy and sell in England. The present wording, which unties the hands of Amtorg in the United States and those of Arcos in England, would mean that Arcos would be allowed to buy goods in England even though it might be more profitable for Amtorg to buy the same goods in the United States, or vice versa. In other words, the text as it stands now would dissolve the Russian foreign trade monopoly fictitiously into a number of independent enterprises, and would fail to secure commitments to a co-ordinated policy of non-discrimination. All this was hardly intended. It would seem desirable, therefore, to rephrase the clause "country other than that in which the enterprise is located" in such a way as to make it clear that the dispensation from the provisions of the charter refers only to transactions among enterprises located within the territory of the state-trading member.

Somewhat puzzling is another dispensation which was added in London and was absent from the previous drafts (Article 31:2). It will be recalled that purchases by state enterprises for governmental use and not for resale are not subject to the principle of commercial considerations. For such transactions there was introduced the extremely vague rule of "fair and equitable treatment" for the commerce of other members. It is perhaps the weakness of Article 31 that its scope is extended so far as to cover all forms of state trading. For it seems that the authors of this provision did not have in mind conditions characteristic of a centralized planned economy with a complete state-trading monopoly. As far as Russia is concerned, the usual procedure is for a government import organization to buy abroad and resell to a government industrial enterprise. The text of the provision speaks of "purchases for governmental use and not for resale." But in Russia the most frequent case is the one of resale *for* governmental use. The writer is ready to assume that the exception in question is not meant to apply to Russian purchases for use within the planned economy, and that the principle of commercial considerations is intended to apply to those purchases. The text, however, should be changed so as to make this sufficiently clear.

Finally, attention may be called to the fact that a step has been made

toward implementation of the nondiscrimination pledge by establishing the obligation of the state-trading country to furnish, in response to representations of injury, "such information as may be appropriate in connection with the consultation" provided for in Article 35 of the charter. It should be noted, however; that this provision has been considerably diluted in London, as the language of the "Suggested Charter" was much more straightforward. In the earlier form the reference was to the obligation "to provide such specific and detailed information as will make possible a determination as to whether the operations of the enterprise are being conducted in accordance with the requirements of this paragraph." There will be another opportunity to touch on this point.

In general it may be concluded that the state-trading provisions of the charter in their present form, while containing a number of improvements, are still in need of amendment if they are to give adequate expression to the underlying principles. The principles themselves, however, call for further scrutiny, which in turn may suggest further amendments.

IV. *The Principle of Commercial Considerations*

The principle of commercial considerations as stated in Article 31 raises questions as to its (1) consistency and clarity, and (2) its practicability.

1. The present charter proceeds in such a way as to lay down first the general principle of nondiscrimination, in the form of assurance of treatment no less favorable than that granted any other country, and then to clarify the concept by reference to the principle of commercial considerations. In fact, the latter is presented as an implementation of the former in such a way that a country conforming with the principle of commercial considerations must be presumed to fulfill the general pledge of nondiscrimination. The tacit assumption of the charter is that the two principles are at all times mutually consistent. Yet, as Professor Viner has pointed out,³ the principle of commercial considerations must be presumed to permit discriminating monopolistic and monopsonistic practices; and a state-trading country which abstains from such practices when in a position to use them would, in fact, violate the principle of commercial considerations and forego selling or buying, as the case may be, in the most advantageous market. If the general pledge to abstain from discrimination is meant to proscribe also this specific form of monopolistic discrimination, the two principles are mutually inconsistent, and it may be impossible to observe both of

³ Jacob Viner, *Trade Relations between Free Market and Controlled Economies* (League of Nations, 1943), p. 77.

them. The answer would hinge on the interpretation of what is to be regarded as "treatment no less favorable" within the meaning of the charter. In the past, most-favored-nation treatment granted by a non-state-trading country was considered as a government's sufficient guarantee of nondiscrimination, even though there might have been in that country a number of cartels which practiced monopolistic discrimination in foreign markets. The fact that in Russia the signatory of an international agreement and the trader have become identical should not per se constitute a difference, since it is not intended to penalize Russia on account of her trading system. It may be inferred, however, from the inclusion in the charter of a section on "restrictive business practices," that the charter aims at a greater restriction upon discrimination than was previously achieved by most-favored-nation treatment. If this is the case, and the phrase "treatment no less favorable" in Article 31 is to be interpreted accordingly, then the charter should distinguish between acceptable and objectionable commercial principles.

It may be added here, however, that the practical significance of this aspect of the problem should not be exaggerated. The fact that Russia has a monopoly of foreign trade does not mean in itself that Russia has monopolistic positions in world markets, either as a buyer or a seller. Russian exports, as a rule, appear on world markets in competition with exports from other countries. Russia may indeed establish monopolistic positions through memberships in international cartels, and past experience seems to show that Russia did not shun such arrangements for the sake of principle. This is, however, essentially a problem of how to curb restrictive business practices rather than one of state trading. Nor did Russia in the past enjoy monopsonistic positions with regard to her imports. It is true that in the early thirties, when the great depression coincided with the period of the First Five-Year Plan, Russia bought considerable proportions of certain countries' exports of individual commodities. Thus, in 1931, she took about 90 per cent of the world's exports of tractors, and 55 per cent of all machine tools exported from the United States. In 1932, she took 81 per cent and 74 per cent of all machine tools exported from Germany and England, respectively. This, however, did not at that time imply a very strong bargaining position on the part of Russia, as her needs for these imports were very pressing. Similar situations are conceivable, and it is quite possible that in conditions of a general depression Russia may well attempt to take advantage of the low elasticity of the short-term supply curves of her trading partners. There may be, indeed, situations where a considerable portion of the producing plant in a country exporting to Russia has been adjusted to Russia's demands and the threat to stop purchases may, in the short run, yield favorable commercial

terms to Russia. Extraction of the benefits which might result from such a situation would be in accordance with the principles of commercial considerations as phrased in the charter. Ruthless exploitation of such possibilities, however, would make supplying firms wary in their normal contracts with Russia and might cost the Russians more in the long run than they would stand to gain. Finally, a policy of monopsonistic discrimination could not be very effectively applied by Russia as long as connections between the markets of high elasticity of supply and those of low elasticity of supply have not been severed. In general, much will depend on world economic stability. If ruinous depressions can be successfully avoided, the attraction which might be exercised by trade with a steadily expanding Russian economy will be diminished. Under conditions of general prosperity shifting to new trade channels is relatively easy and domination of a country's international trade by a single buyer rendered difficult.

To return to the interpretation of the principle of commercial considerations, it may be noted that it is uncertain to what extent it includes bulk buying. It may be recalled that some time ago the question whether the principle of commercial considerations is intended to cover government bulk buying was raised in the House of Lords and some apprehensions were expressed lest the principle be interpreted in an unduly restrictive manner.⁴ It is easy to construe the principle in such a way as to permit bulk buying. It would be difficult even with reference to a partial state-trading country to work out appropriate coefficients which would make the advantages of bulk buying commensurate with price advantages. It will no doubt be still more difficult to apply such formulae to complete state-trading countries.

The foregoing also provides some illustration for the fact that for a state-trading country commercial considerations proper tend to merge with general economic considerations. Concern with the continuity of supply and demand may, perhaps, legitimately be regarded as a commercial consideration. However, in a state-trading country there may be only one step from mutual bulk buying deals to bilateral payments agreements. The individual trader in a nonstate-trading country must arrange for financing of imports either from his own or from borrowed resources, but is normally not concerned with the effect of his transactions on the aggregate foreign exchange position of his country. But for a state-trading government, which must regard the individual transaction as a part of the totality of its foreign economic relations, concern for the wherewithal for each individual purchase cannot be separated from concern for the national supply of foreign exchange. Thus a state-trading country which concludes a bilateral payments

⁴ *Parliamentary Debates*, House of Lords, Official Report, Vol. 138, No. 40, p. 731.

agreement may still argue that it is acting on the basis of commercial considerations, although this involves the specific discrimination of bilateralism, and is compatible neither with the spirit of the charter nor with the general pledge not to accord any member a treatment less favorable than that accorded any other country. While it is true that under the charter a nonstate-trading country could not become a party to bilateral payment agreements, the principle of commercial considerations would not necessarily exclude such deals between two state-trading countries. It seems, therefore, that it may be advisable to include in the charter an explicit proscription of bilateralism for countries with a complete monopoly of foreign trade.

2. Some reference to the practicability of the principle of commercial considerations was made at the end of the preceding paragraph. In fact, all inconsistencies of interpretation attached to the principle have a bearing on the question of its practical implementation, inasmuch as they tend to render such implementation more difficult. But even if the principle of commercial considerations were completely unambiguous, there would still remain the question of its practical applicability. It is one thing to state an obligation, it is another to establish the fact that it has been breached, and still another to secure its enforcement. Let us take a very simplified example and assume that the principle of commercial considerations implies nothing more than the straight obligation to buy in the cheapest market. Prices for the most important goods entering into Russian imports are not determined on commodity exchanges but are set in the process of bargaining between the buyer and the seller. The initial price offered by a firm in country A to a state-trading country may be higher than the price agreed upon after negotiations in country B, but lower than the price which the firm in country A would have been willing to concede ultimately. Yet the state-trading country would be able in this case to furnish documentary evidence that it had bought in the cheaper market. This is not to cast aspersion on the good faith of any country, but rather to point out the extent to which good faith will have to be relied upon. Obviously, this reliance will be the greater, the larger the number of factors recognized as commercial considerations.

The distinction between commercial and political considerations is rather unequivocal as a general proposition. To swap an air base for commercial advantages would not be permissible. On this, the charter is very clear. But unless it should be possible to establish all the pertinent facts in individual cases of alleged "commercial" motivation the practical value of the distinction will be limited.

In this connection it may be recalled that the charter carries a stipulation that, in case of complaints by other countries, appropriate

information shall be provided by the state-trading country. This is an indispensable part of any arrangement for practical implementation of the charter. Yet the provision in its present form may require both too little and too much. It may require too little because it may well be necessary, at least in some cases, to go beyond mere supply of information and establish more active supervisory functions for the I.T.O. It may require too much because in its present form it does not take into account the need for commercial secrecy. It is clear that, even though acting in completely good faith, state-trading countries will be reluctant to divulge their sources of supply, customers, and terms of transactions unless guarantees of confidential treatment for this information are given by the Organization. It may be considered a deficiency of the charter that it fails to stipulate that the Organization alone should receive the information and no one except authorized officials of the Organization should have access to it. Incidentally, the question of commercial secrecy well reveals the general difficulties inherent in an institutional framework designed to eliminate discrimination in economic relations with state-trading countries. If an enterprise in a state-trading country were forced to disclose information on its individual transactions, it would find itself placed on a less favorable basis than an enterprise in a free or "mixed" economy. On the other hand, if no such information were made available, the principle of nondiscrimination would be stultified. Obviously some compromise is necessary, and a guarantee of secrecy to the state-trading country might constitute an acceptable solution.⁵

V. The Principle of a Global Purchasing Arrangement

Article 33⁶ of the charter gives no indication as to how the size of the global purchasing arrangement is to be fixed. Since it would be difficult indeed to find workable general criteria for determination of the quota, it must be assumed that such determination will be left entirely to bargaining between the state-trading country on the one hand and the rest of the world on the other. This raises some questions as to the prospective relative bargaining positions. The charter provision must be taken to mean that the rest of the membership will at-

⁵ Article 26, which deals with "Restrictions to Safeguard the Balance of Payments" and establishes the Organization's procedure for dealing with such restrictions, provides tentatively that a *partial* state-trading monopoly need not "disclose information which would hamper the commercial operations of such a state-trading organization." This provision is tentatively placed in the Article cited because the Preparatory Committee in London contemplated that a similar provision referring to all types of state-trading might later be inserted in the text of the state-trading articles. This would be a step in the wrong direction. The problem is not to restrict supply of information, but to protect the information received.

⁶ Text not agreed upon in London.

tempt to make the granting of tariff and other benefits dependent on the conclusion of an agreement on the size of the quota for a specified period. In this connection portions of Section G of the charter, which covers relations with nonmembers, may be pertinent.

No member shall be a party to any agreement or other arrangement with any non-member under which such nonmember shall be contractually entitled to any of the benefits under this charter. (Article 36:2)

With regard to countries which, although eligible for membership, have not become members or have withdrawn from the Organization, no member shall, except with the concurrence of the Organization, apply to the trade of such countries the tariff reductions effected by such Members pursuant to Article 24. (Article 36:3)⁷

This apparently means that the state-trading country could not, prior to joining the I.T.O., conclude a number of important bilateral agreements in which tariff concessions and assurance of most-favored-nation treatment were exchanged for minimum purchasing commitments. If this were possible, the state-trading country might be able to strengthen its bargaining position somewhat before seeking membership. Since this is not the case, determination of a global quota for the first time might indeed lead to establishment of a somewhat larger commitment than would otherwise be agreed upon.⁸ But the global quota would have to be adjusted periodically, and it seems quite unlikely that such an arrangement would be set for a period longer than one year. There is nothing in the charter to suggest that at the end of the period the state-trading country would forfeit all the benefits of the charter, including tariff concessions and most-favored-nation treatment pending agreement on a new quota. Its bargaining position in subsequent negotiations would accordingly be materially strengthened.

Whatever the precise size of the resulting global quota, it is difficult to escape the feeling that there is a certain lack of commensurability between the purpose and the instrument. The main purpose of the global quota provision is to lead Russia away from the path of autarchy, or of what in Russian parlance is called the "technical-economic independence of the country." Russia's foreign trade after the years of the First Five-Year Plan diminished greatly, both absolutely and in relation to the volume of world trade, and the gross national output of Russia.⁹ There is no indication so far that a revision of these policies

⁷ Text of Article 36 was not agreed upon in London.

⁸ The state-trading country might insist, however, that the agreement carry an escape clause to parallel the "balance-of-payments-exception" to rules regarding quantitative restrictions in nonstate-trading countries (Article 27).

⁹ In 1936-37 the volume of Russian exports and imports was some 35% and 45% respectively below that of the best years of the early thirties. In 1930 Russian exports amounted to 3.5% of the gross value of output of industry and agriculture; in 1936 the corresponding percentage was only .8%. In 1931-32 the turnover of Russia's foreign trade was 2.5% of the world total; in 1938, only 1.2%. D. D. Mishustin, *Vneshnyaya Torgovlya i Industrializatsiya SSSR* (Foreign Trade and Industrialization of the U.S.S.R.) (Moscow, 1938), p. 99.

and an expansion of foreign trade is contemplated. There is a good deal in the current five-year plan which points toward a general continuation of prewar policies. Autarchic or semiautarchic policies must be presumed to be motivated largely by considerations of military security. A subsidiary consideration may be fear of economic instability in world markets and the consequent repercussions in Russia if a large volume of foreign trade is maintained. It should not be argued, however, that Russia's foreign trade policies are unlikely to change at all. On the contrary, improvement in international political relations, together with expansion and increased stability of the world economy, may indeed diminish Russia's interest in autarchy and induce her to carry out such structural changes in her economy as are required for a substantial increase of her foreign trade. But it does seem unduly optimistic to hope that questions of such magnitude can be decisively influenced by the "direct approach" of a global purchasing commitment.

VI. Future Development of Russia's Foreign Trade and the I.T.O.

The question of the prospective development of the volume of Russia's foreign trade has a dual relationship to the two principles discussed in the preceding paragraphs. The purpose of the global purchasing arrangement is to achieve a maximum expansion of Russia's trade. On the other hand, a large volume of foreign trade may tend to decrease the workability of the principle of commercial considerations. If the total volume of trade is relatively small, the importance of potential discrimination in that trade is greatly reduced. It is quite likely that the quantitative arrangements of the thirties worked satisfactorily, partly because of the insignificance of the total trade. A huge volume of trade makes discrimination worth while from the discriminator's point of view and the supervision of discrimination an extremely arduous task. Thus, a sudden and very substantial increase in Russia's foreign trade—that is to say, a successful implementation of the global quota provision—might render more difficult the implementation of the principle of commercial considerations.

In connection with the total volume of Russia's foreign trade, mention may be made of the related, although separate, problem of the changing composition of Russian exports. There is reason to believe that within the foreseeable future the structure of Russian exports will undergo substantial change, and the share of industrial exports in total exports will increase appreciably at the expense of agricultural and raw material exports. Appearance of Russian industrial goods on foreign markets would be likely to create some problems, provided that exports of individual commodities were on a substantial scale. Producers introducing their products on new markets frequently reduce

prices temporarily until the market becomes acquainted with the product. Under these circumstances charges of Russian "dumping" would be rife; competitive interests would hardly be appeased if informed that the practice complained of did not fall strictly within the concept of dumping as understood in economic theory.

The charter has very wisely refrained from any attempt to treat the specific problem of Russian dumping.¹⁰ The conceptual difficulties would have proved an insurmountable obstacle to such an expansion of the pertinent articles. A meaningful provision would have to be framed in terms of underselling rather than dumping and its drafting would present an impossible task. Article 17 of the charter, however, is concerned with limiting the extent of antidumping measures taken by the members in order to prevent the charge of dumping from being used as a pretext for unduly restrictive measures. Those limits, based on price and cost comparisons, are of little practical relevance with regard to Russia. But if the charter can very properly dodge the problem, the I.T.O., as an operating agency, will not be able to escape it. The task of reintegrating state-trading countries into the world economy, which the charter has set for the I.T.O., implies that the I.T.O. is committed by the spirit of the charter to attempt to minimize such frictions as would be created by the growth of such countries' foreign trade, as well as by its changing structure. In other words, it would seem that if the appearance of Russian enterprises as sellers on industrial markets were to be accompanied by considerable underselling, decried as dumping, it would devolve on the I.T.O. to press for reasonable compromises which would on the one hand help to assimilate Russia's new exports and on the other to limit the impact of these exports on Russia's competitors.

Finally, the vexed question of what has come to be called the "Russian zone of influence" may be touched upon. The emergence of Russia as an overwhelming political influence in Eastern Europe, the social and economic changes in that area in the wake of the war and the resulting increase in state trading throughout the region, and the special and peculiar institutional forms of Russian investment in "joint companies" in a number of countries in that area—all these no doubt would create special problems for the I.T.O.

If a number of state-trading satellites were to enter the political orbit of a large state-trading country, the difficulty of testing their behavior by the rules of the charter would be substantially increased. Co-ordinated buying and selling policies of two or more state-trading monopolies and foreign sales and purchases of "joint companies" would

¹⁰ The charter's provision against dumping (Section D, Article 30) is presumably not intended to apply to a state-trading country.

present a complicated maze to the eye of the I.T.O. observer. Under these circumstances the task of distinguishing between political and commercial considerations would become very difficult indeed. Moreover, discrimination might lie further back, i.e., in the planned structural changes carried out in the countries concerned, rather than in the actual trade conducted on the basis of those changes. The quantitative aspect of the problem would be by no means negligible inasmuch as imports and exports of Eastern European countries located in the Russian zone of influence averaged 10 per cent and 12.5 of Europe's total imports and exports, respectively, during the years 1924-38.

On the other hand, one should beware of exaggerating these problems. It should be recalled that the present draft of the charter leaves some room for preferential treatment and there is no reason why state-trading countries may not claim similar rights for themselves. In addition, it may be pointed out that while Russia's share in the trade of the zone has shown a substantial increase since the war the increase varies greatly from country to country. From such statistics as are available, it may be concluded that Russia has become predominant in the trade of such countries as Bulgaria and Poland, but that her share has remained moderate in the foreign commerce of Finland, and still more so in the case of Czechoslovakia. But the trade of the zone countries in 1946 was only about 20 to 30 per cent of prewar. To retain her present shares in the trade of individual zone countries may require a strong additional effort on Russia's part, and the measure of success may vary from nation to nation. To the extent that Russia's participation in the trade of important trading countries of the zone remains on a moderate scale, the problems listed in the preceding paragraph may be of manageable proportions, so that in the course of its practical work the I.T.O. might be able to exert its influence in such a way as to eliminate at least the more flagrant cases of discrimination. Should the I.T.O. succeed in developing gradually some supervisory functions in this field, its chances for reasonable success would be greatly enhanced.

VII. *Concluding Remarks*

Two conclusions can be drawn from the foregoing discussions. First, the provisions of the charter, as amended in London, still leave room for some improvements both to remove inconsistencies and to make the provisions either more complete or better adapted to actual conditions. These amendments, however, would not alter the basic character of the charter. Second, the two main principles which the charter applies to state trading constitute neither clear nor easily policeable obligations.

The significance of these critical comments is admittedly limited, because they are not accompanied by any alternative solutions. The fact that a substantial amount of time and thought has been devoted to the problem in recent years without production of any other workable solution cannot be overlooked. It suggests strongly that the essence of a state-trading monopoly is incompatible with general arrangements which *in themselves* constitute a reasonable guarantee for the attainment of an expanding trade on a nondiscriminatory basis. What then is the value of including "Russian" provisions in the charter? The pessimist's answer is, "None!" He rejects Russia's participation in the I.T.O. as unsound and objects to a compact in which there is such an obvious discrepancy between the benefits conferred on Russia and the commitments undertaken by her. At the other extreme stands the optimist who holds "that all the fears of 'discrimination' on the part of the Soviet trading organizations are but new 'bogies' similar to the past 'bogies' of 'Soviet dumping' and 'compulsory labor.'"¹¹ While the pessimist feels that the state-trading provisions of the charter would be ineffective, the optimist considers them unnecessary. Thus both join in a common skepticism.

This writer feels that there is room between the two extremes for an intermediate opinion which permits some measure of restrained optimism. If the charter leads to a substantial reduction of trade barriers in nonstate-trading countries, the benefits which a state-trading country would obtain through adherence to the charter would be of real importance. Thus Russia's self-interest may guide her toward co-operation in the I.T.O. and make her unwilling to risk loss of those real advantages for the sake of short-run gains resulting from discrimination. Moreover, as mentioned before, Russia's power of economic discrimination and, by the same token, such gains as she may be able to reap from discrimination should not be exaggerated. While it must be recognized that the provisions of the charter do not present an immediate solution of the problem, they still may lay the groundwork for future development. As has been indicated before, with regard to Russia, the constitution of the I.T.O. may matter less than its administration. In a sense, the heart of the state-trading provisions lies in Article 35 regarding consultation. For it is the everyday work of the I.T.O. that may determine the ultimate success or failure of the charter provisions. If the I.T.O. succeeds in asserting its authority in consultations, if it is successful in mediating and persuading and eventually in supervising, then a series of precedents, a case law of the I.T.O., will be established which could constitute a major contribution to the goal of Russia's integration in the world economy.

¹¹ Alexander M. Baykov, *Soviet Foreign Trade* (Princeton, 1946), p. 88.

In one sense the criticism of the principles of the state-trading provisions offered in this paper may have a constructive function. The development described in the foregoing paragraph can be at best but a slow and laborious process. There will be setbacks and crises. If the character of the state-trading provisions as a tentative promise rather than a fulfillment is recognized, false expectations and ensuing disappointments may be avoided.

No one can predict whether Russia will agree to join the I.T.O. Should she decide to become a member, the future will settle the dispute between the pessimists and the optimists. The state-trading provisions of the charter may succeed or fail in the test of reality. But their challenge to lay the basis for peaceful economic collaboration between different economic worlds deserves the respect both of the advocate and the critic.

DISCUSSION

ABRAM BERGSON: I shall comment on only a few of the many interesting questions that the speakers have discussed.

1. *The Upward Bias in the Soviet National Income Series Expressed in Terms of 1926-27 Rubles.* On the existence of this bias I am in complete agreement with Dr. Studenski and Dr. Wyler. I have some reservations, however, regarding their explanation of the bias, and particularly with respect to their reasoning on the Soviet statisticians' three methods for computing value added in terms of constant prices. They conclude that the use of these methods probably led to an "overestimation" of the national income, but it seems to me that their argument on this is not convincing. With regard to the first and second methods, in view of the uncertainty about changes in price, cost, and production relationships, it is difficult to see why an upward bias is any more likely than a downward bias.¹ With regard to the third method, that of "direct computation of net value in constant prices," if I understand it aright, this seems to be an entirely correct statistical procedure, and I fail to see why it leads to any bias whatsoever.

In general, in trying to explain the upward bias, my own inclination is to emphasize mainly several other factors to which Studenski and Wyler refer, in particular: (a) the valuation of new commodities in terms of the prices prevailing at the time of their introduction; (b) the valuation of production in certain branches of the economy, e.g., construction, in terms of current prices; (c) the large-scale shift from household to factory production in the case of many consumers goods. The first two of these three factors are particularly important because of the great price inflation that occurred under the prewar five-year plans.

2. *Need for Complete Recalculation of the Soviet National Income Series; the Valuation Problem.* In view of the manifest deficiencies in the official Soviet national income series, a complete recalculation clearly is in order. What we should like to have here is, in particular, a tolerably accurate series measuring national income in the orthodox sense and with results broken down by source and use in much the same way as is now customary in studies of United States national income. Until such a calculation is carried out, we shall be in the dark about much that has happened under the Soviet prewar five-year plans.

In such a recalculation, it is well to recognize that there are conceptual as well as statistical problems to deal with which may not be susceptible of any altogether satisfactory solution. Suppose for example we had complete

¹ With regard to the second method, the deflation of value added by an unadjusted finished product price index, there is perhaps a presumption in favor of an upward bias as a result of the introduction of the turnover tax. This it might be supposed raised the value added (inclusive of the tax) by a larger percentage than that by which it raised finished product prices (inclusive of the tax). If so, the deflation of the value added by the unadjusted price index would tend to exaggerate the increase in production in real terms. However, a turnover tax was also levied at a high rate on agricultural raw materials, and there may have been a tendency for the prices of many manufactured goods to rise more than value added on this account. To this extent, the tax would have led to a downward rather than upward bias.

information on price and quantities year by year for all branches of the Soviet economy. Conceivably we might then recalculate Soviet national income in terms of the prices of some recent year, and thus reduce to manageable dimensions the new commodity problem. However, we should still have to reckon with the very vexatious question of the meaningfulness of the Soviet ruble price structure. This has many well-known peculiar features; e.g., prices generally include a widely varying turnover tax, there is a very complex system of differential prices for agricultural procurements, etc.

Because of these features of ruble prices, it is understandable that in the few attempts that have been made to recalculate Soviet national income, prices of a foreign country have been substituted for ruble prices as a basis for valuation. Dr. Wyler's recent recalculation is in terms of dollar prices. While this may be a necessary expedient, a question inevitably arises here as to the appropriateness of foreign prices to the Soviet conditions. In view of the advanced technology of our machinery industries, for example, the prices of these goods in this country probably are comparatively low in normal times. The increase in machinery output was one of the major factors in the increase of the Soviet national product under the five-year plans. Thus the use of United States prices as weights in calculating Soviet national income would tend to minimize the rate of increase of the Soviet national product.²

3. *The Use Made of the National Income Series in Planning; Indirect Taxes Not an Important Item in 1926-27.* Studenski and Wyler advance the interesting idea that, because of its deficiencies, the Soviet planners make little or no use of the national income series in their practical work. This may be so, but I should like to record the fact that I have seen no evidence of it. Goals for the total national income and its major components were published regularly along with other goals in the prewar plans; a goal for national income is included in the Fourth Five-Year Plan. Of course, if the Soviet planners do use the official income figures in their calculation an interesting question arises as to just how this affects their planning work.

With regard to the inclusion of turnover taxes in the Soviet national income concept it is difficult to see how this could offset to any great extent the services that are omitted. The turnover tax did not exist in 1926-27 and other indirect taxes were comparatively small.

4. *Soviet Economic Conditions and Prospects.* Dr. Schwartz has assembled much interesting information on the difficulties the Russians are experiencing in fulfilling their ambitious Fourth Five-Year Plan. While I have some reservations on particular points, I am sure that in general this is a fair summary of what is available in the Soviet press and other sources on this subject. Taken by itself, however, it seems to me that this information might possibly lead to an unduly pessimistic conclusion regarding Soviet economic conditions and prospects (pessimistic, that is, from the Soviet point of view). For a balanced judgment on this, I think several other facts in addition to

² See Maurice Dobb's comments on Colin Clark's recalculation, *Soviet Economy and the War* (New York, 1943), pp. 37 ff.

those mentioned by Schwartz should be taken into account. I say "facts." Perhaps it would be more accurate to say my impressions as to the facts. I think, however, that the following propositions can be asserted with reasonable assurance.³

Despite the great material damage the Russians suffered, the total capacity of Soviet industry probably is now very nearly as great as it was before the war. This remarkable situation is accounted for partly by the fact noted by Schwartz that the Russians managed to achieve in their all-out war effort a great expansion of capacity in the Urals and Siberia and partly by the progress of reconstruction to date.

The total fixed capital and output of the whole country will exceed prewar levels well before reconstruction of the invaded areas is completed. This is because of the wartime expansion in the Urals and Siberia and the further expansion contemplated there under the Fourth Five-Year Plan. According to the plan, national income in 1950 (in 1926-27 rubles) is to be more than a third above prewar. The goals of the Fourth Five-Year Plan may possibly be overly ambitious. On the record to date this seems to be so. I am not surprised at this. Russian plans are always overly ambitious, perhaps by design, in order that they may induce the population to exert a maximum effort. But even so, making all due allowances for underfulfillment, the Russians certainly will be back on their feet far sooner than has been generally anticipated in this country.

5. *Consumers Goods Versus Heavy Industries.* Perhaps it may be in order to say a few words also about another aspect of Russia's Fourth Five-Year Plan of much current interest, which Schwartz touches on but does not develop in any detail. I refer to the question of the relative emphasis the Russians are giving to their consumers goods and heavy industrial production.

In the briefest terms, the essential facts on this much discussed question as I see them are these:

The wartime expansion of capacity in the Urals and Siberia was practically restricted to heavy industries, to basic industries and munitions. As a result of this expansion, the total output of heavy industries in 1945, according to my rough calculations, probably exceeded the prewar level, though only to a small extent.

In the all-out war effort, consumers goods necessarily were virtually neglected. Except in the case of agriculture, practically nothing was done in the east to make good the losses in the west. As a result, the total output of consumers goods in 1945 probably was about 35 per cent below prewar.

Thus, as a result of the wartime developments there was a drastic change in the structure of the Soviet economy. In contrast with the American experience, this change in structure was based not so much on an over-all expansion of heavy industries beyond the prewar level as on a drastic cut in consumers goods.

³ I hope to make available in the near future in a separate article the details supporting these propositions as well as those advanced below in section 5, "Consumers' Goods Versus Heavy Industries."

Essentially what the Russians now propose to do under their Fourth Five-Year Plan is this:

They will continue their prewar policy of building up heavy industries. They propose not only to reconstruct the industries of the invaded areas, but also to carry out extensive new investment and construction in the east. On this basis, the output of heavy industry in 1950 is to be far in excess of that of 1940; e.g., the goal for steel for 1950 is 38 per cent above 1940; the goal for coal, 51 per cent above 1940; that for electric power 70 per cent.

While the Russians thus are continuing their industrialization drive, they are actually slowing it down rather than speeding it up as many commentators say. The rate of expansion projected for heavy industries from 1945 to 1950, under the Fourth Five-Year Plan, is far below that projected under previous plans. It is probably less than half of that projected under the Third Five-Year Plan.

On this basis, the production of consumers goods is to be raised quickly from the abysmally low present levels to a more tolerable level, and in 1950 per capita standards are to be somewhat above prewar.

Finally, and this is an interpretation and not a statement of fact, the foregoing does not mean that the Russians have introduced any basic revision of their policy of industrialization. In slowing down the tempo of industrialization, it seems to me, they are simply adapting this policy to the special circumstances of the reconstruction period. To a very great extent, the slowing down of the drive is a practical necessity, in the face of the extreme shortage of consumers goods.

PAUL A. BARAN: There are a great number of questions which I would like to raise in connection with the interesting papers of Messrs. Studenski, Schwartz, and Gerschenkron. But since the time at my disposal is very short, and since Dr. Bergson has dealt brilliantly with the issues raised by Professor Studenski, I shall confine myself to a few comments on the papers of Drs. Schwartz and Gerschenkron.

The interpretation of the Fourth Five-Year Plan, familiar from the daily press and apparently accepted by Dr. Schwartz, sees the main reason for the stress placed by the Soviet Government on the reconstruction and development of heavy industries in its desire to restore and increase the military potential of the Soviet Union. While there is no doubt that the Soviet Government is defense-conscious, and very anxious to be prepared for all exigencies, I wonder whether there are not important economic and technological reasons for the allocation of resources, as envisaged in the Fourth Five-Year Plan. As Dr. Bergson has pointed out, the total industrial capacity of the Soviet Union at the end of the war was just about as large as in 1940. Since consumer goods output was during the war all but discontinued, this relatively high level of industrial activity was due to the expansion of munitions manufacturing sufficient to offset the disruptions of industrial production caused by the destruction and removal of plants and manpower in the invaded parts of Russia. It is very doubtful whether it would have

been possible to convert economically these munitions plants to the production of anything but heavy industrial equipment. To shift a tank factory to tractor output is very much easier than to make it produce cotton goods. Suffering also under considerable shortages of skilled manpower, the Soviet Government is most likely very anxious to keep mechanically trained workers at the places of their present employment rather than to shift them into consumer goods industries which require different skills and probably different locations. Thus, the nature of the reconversion and expansion program may be seriously influenced by the structure of the industrial plant available at the end of the war and only to a small extent subject to free choice of the Soviet planners.

Another factor which has to be taken into account is the prospective trade between the U.S.S.R. and the countries located in what has come to be called Russia's sphere of influence. It is quite possible that Russia expects to exchange products of her heavy industries for consumer goods that will be produced in those countries once their reconstruction is completed. While it is uncertain what importance the authors of the Fourth Five-Year Plan attached to this possibility, it is quite probable that the expectations of an expanded trade with neighboring countries, of foreign loans, and of German supplies on the reparation account influenced the proportion of resources devoted in the plan to consumer goods production.

The drive for a close integration of the Soviet economy with the economies of the neighboring countries may be to a large extent responsible for Russia's reluctance to join the International Trade Organization—to come to Dr. Gerschenkron's paper. The provisions of the I.T.O. charter discussed by Dr. Gerschenkron would render it very difficult for Russia to develop a system of special agreements with the countries entering her "sphere of influence." Vague as the "commercial considerations clause" may be, it would call for an orientation of Russian foreign trade along lines contrary to the basic aim of close economic and political co-operation with Poland, Yugoslavia, Czechoslovakia, Bulgaria, Rumania, and Hungary. I would not be surprised if Russia would be willing to forego many advantages offered by the charter in exchange for the possibility of maximizing her trade with those countries, reducing, if necessary, the volume of transactions with the rest of the world. The idea of an economic integration of Eastern Europe under a unified plan of socialist construction is too attractive to Russia to be exposed to dangers which might result from the adherence to the I.T.O.

On the other hand, Russia's decision as to membership in the I.T.O. obviously depends on the Soviet appraisal of the economic outlook for the capitalist countries, particularly the United States. It is well known that even many British observers are very fearful of too close a tie-up of the British economy with the economy of the United States. From a number of articles published in the Russian press and partly reproduced in American dailies one gains the impression that a major depression in this country is expected by Russian economists before very long. That an American depression would have serious repercussions in other countries goes without

saying. Russia may quite reasonably anticipate being able to secure favorable credit and delivery terms once the sellers' market is over and unemployment in various countries renders Russian requests for loans and supplies more attractive than they are now. Dealing with countries competing with each other for the Russian market, the Soviet foreign traders may be in the position to strike favorable bargains with individual countries, conclude barter and clearing agreements, and secure special advantages in the terms of trade, etc. Many, if not most, of these possibilities would be precluded by the I.T.O. charter.

In the light of these considerations, it would seem safe to assume that Russia will shun international commitments that would seriously limit her freedom of action, and will seek to place emphasis on bilateral trade and credit agreements, like the one recently concluded with Sweden. I would venture the guess that after the present bargaining among the Allies is over and the peace treaties duly signed, Russia's economic relations with foreign countries will return to the pattern established in the early twenties. Discussing the provisions of the I.T.O. charter, Dr. Gerschenkron presented admirably the reasons for Russia's *nonadherence* to the organization. Facing the prospect of being outvoted on each and any occasion, threatened with the necessity of furnishing to the outside world information that she is not accustomed to supply, obviously unable to claim veto power in an economic organization, Russia will probably prefer to deal with each country separately and to seek such trade and credit arrangements as may be obtainable in each particular case. I have the feeling that such a policy would be more in line with the principles and traditions of Soviet foreign economic relations, and it may very well be that it would be even the most advantageous course from the standpoint of the Russian economy.

ROUND TABLE ON ECONOMIC RESEARCH

SIMEON E. LELAND, *Chairman*

The Committee on Research has had, I believe, a most fruitful year during which several meetings were held, and three subcommittees to inquire into research opportunities in the records of wartime governmental agencies were organized. These subcommittees' work is an extension of the preliminary survey of war-agency records and of places for their preservation carried out last year by Harold Rowe at the request of the Research Committee and reported on at the Cleveland meeting.

One subcommittee has investigated the content and possible research uses of the price control and rationing records. This group is composed of J. K. Galbraith, E. T. Grether, E. S. Mason, A. C. Neal, J. D. Sumner, and R. B. Heflebower, Chairman. This subcommittee presents an extensive report of its findings and recommends that the Association seek support for a project to develop a collection of research materials drawn from the price control and rationing records. This recommendation springs from the conviction of the subcommittee that while the research materials in these records are extensive and of great potential value, there is little chance that individual researchers will or can make liberal use of the documents in their present form.

The project proposed would involve extensive reworking and summarizing of both qualitative and quantitative information in the records. Extreme care will have to be exercised to avoid disclosure of confidential information about particular firms while at the same time putting together those summaries and showing those relationships which will be of value to those engaged in basic economic research. To carry out such a project even to the extent of preparing and publishing the more valuable records would cost, it is estimated, from \$100,000 to \$150,000 and would require two years' work by a sizable staff.

Although it is not my purpose here to outline the project in detail I do wish to emphasize its main feature. First the emphasis would be on materials about the peacetime economy, a subject on which OPA gathered extensive information because of the methods and policies of control adopted. This would not eliminate all information about the 1942-46 period; but the concern about the characteristics of the peacetime economy would guide in the selection of materials. Next, the materials to be selected would be those related to some such central topic as "The Structure of Commodity Markets and Prices," which would include the following subtopics among others:

1. Geographical price patterns
2. Methods of price quotations (other than 1)
3. The production pattern for the product as shown by
 - (a) Size distribution of producers
 - (b) Proportion of volume of the firms represented by the product
4. Vertical relationships as shown by
 - (a) Degree of integration
 - (b) Price relationships
5. Relation of price quotations and realizations
6. The price structure of the industry
7. The cost structure for the product and the industry
8. Competitive position of firms classified by such characteristics as size, price structure, and degree of integration
9. Price movements prior to price control
10. Price leadership, and other factors related to price change
11. Sales policy and sales expense in relation to other characteristics of the firms

If this project could be launched by the Association, it would be unique. I have no idea whether any foundation would underwrite the financial obligations involved, but the standing of the subcommittee proposing the project is such that their recommendation deserves something more than merely nominal support. If the Executive Committee is enthusiastic about the project, I believe the project might receive favorable support from one of the foundations.

During the year, a subcommittee to explore research opportunities in connection with records pertaining to liquid and solid fuels was organized. This committee is composed of J. S. Bain, W. E. Hoadley, and J. P. Miller. Their first report constitutes part of the proceedings of the Round Table on Research. During the past year, Mrs. Arnyess Joy Wickens induced the Bureau of Labor Statistics to prepare an inventory of research materials pertaining to labor and manpower problems during the war. This inventory was made available to a subcommittee on research in labor of which Mr. Harry Wolf, of the University of North Carolina, was Chairman. The other members of the committee were: Clark Kerr, W. R. Leonard, R. A. Lester, L. G. Reynolds, and Mrs. A. J. Wickens. This committee presented its first report at the Round Table on Research. The work of these subcommittees should be continued.

While the Committee on Research has not been able to accomplish as much as was hoped, it is the belief of the committee that the need for continuing the Committee on Research has been demonstrated.

CONTENT AND RESEARCH USES OF PRICE CONTROL AND RATIONING RECORDS¹

In connection with the administration of maximum price control and rationing there was accumulated a vast and diversified fund of information about both wartime and peacetime economic life. The characteristics of the records of the agency which administered these controls—the Office of Price Administration—have been reviewed by your subcommittee, which reports that these records constitute a very rich, *potential* resource for empirical research in economics. The value of the records is stated in potential terms for there are difficult problems of access to and effective use of the voluminous files which have led your subcommittee to propose that a group project be set up to prepare a “source book” so that the information in these records will be more generally available to both governmental and individual research workers.

I. Content of the Records

A. *General Comments.* We are discussing here the research use of the records of a gigantic war agency. Even after culling the files, 50,000 cubic feet of OPA's records will be preserved. Within this large mass there is information about almost every aspect of economic life. However, the control problems at hand rather than research use was the guide for the collection and analysis of this information. The work was done in haste and with inadequate personnel, which means that often gaps were not filled, summaries were limited in number, explanation of methods were sketchy or absent, and interpretations were made orally.

Furthermore, the great bulk of the records deal with the period of control, 1942 to 1946. Fortunately, however, the stabilization policies called for the wide use of information about developments of the preceding years, and a portrayal of business and economic affairs as they existed in 1941 or early 1942. In addition, the “freezing” of precontrol relationships carried many of them into the control period. And in some cases facts of the war period may be adjusted to portray the situation prior to or subsequent to control. Altogether, research use is not limited to projects dealing with the war economy.

The preceding comments are hurdles, not barriers. They do suggest, however, that the user of these records should acquaint himself with

¹The members of the Subcommittee on Research Use of OPA Records making this report are J. K. Galbraith, E. T. Grether, E. S. Mason, A. C. Neal, J. D. Sumner, and R. B. Heflebower, Chairman. Because another subcommittee has investigated the usability of war agency records on fuels, that commodity area is excluded from this report.

the OPA organization so as to focus his search for information on those parts of the files where prospecting for pay dirt will be most promising. He should know that the Research Division dealt chiefly with over-all policy problems, and whether it was following this route, or studying price developments or specific price actions, it did so ordinarily by the use of secondary data and rarely with the aid of the operating sections. He should know that the price-legal division usually had access to primary information, but the acute analyses made by the attorneys dealt chiefly with the legality of price actions and on their correlation with basic control policies. In further examination of OPA organization the researcher will find that price control and rationing functioned as separate programs, but that each received aid from the autonomous accounting department. Therefore, the bulk of the primary information will be found in the files of the respective commodity sections of the price and rationing departments and in the corresponding sections of the accounting department.

The second caution is one which is always present in economic research but is particularly relevant here; namely, that a comprehensive understanding of the qualitative information bearing on quantitative materials is ordinarily a prerequisite to the judicious use of the latter. For that reason the researcher would do well to determine who was active in the price control or rationing of the particular commodities he plans to study. These persons can render invaluable aid, for whether they were economists, lawyers, or businessmen they acquired an intimate knowledge of the industries whose prices they controlled or whose commodities they rationed. They can supply much qualitative information and check the accuracy of such impressions as the researcher had previously developed. They can suggest bodies of information in the files, and they can indicate limitations on the usefulness of this material. Later in the researcher's work, he may find that these persons would be willing to criticize a draft of his findings.

Before the researcher plunges into the maze of the OPA files he should look into two types of published sources. The first are the price-ceiling regulations and statements of consideration related thereto, the quarterly reports, the report of Congressional hearings, and publications of the Research Division. Of these sources, the first more frequently contains specific information about industry price structures and business practices. The other sources, with some notable exceptions, deal with operating policies and the problems of controlling particular commodity prices. Second, there is now at work a group of accountants, economists, and statisticians preparing summaries of pri-

mary data collected by the agency, which will be published in a series of bulletins.

In the description of these records which follows it has not been possible for the committee either to locate all of the valuable documents or to include in this report more than the major types of information it found. Likewise, the committee has not been able to appraise the adequacy or accuracy of all of the materials. Instead the committee has attempted to note strong points and limitations of some of the major bodies of information and to suggest some precautions which should be followed by researchers who use these records.

B. *Statistical Data.* The great bulk of the statistical data included in these records is composed of the *price, cost; output, sales, profits, balance sheets* and *materials-used* figures of individual companies.

1. *Profit Data.* Because of the great weight given to earnings as a measure of the need for ceiling price relief, OPA accumulated and analyzed a tremendous volume of corporate profit data.

a) *Manufacturing and Mining.*

(1) *Over-all Corporate Profit Data.* Ordinarily data necessary to show *net operating income, net income before income and excess profits taxes, and net profits after those taxes were obtained.* These earnings figures can then be expressed as return on sale or return net worth. The profit data came from three sources:

(a) On a limited basis prior to 1942 and on an economy-wide basis beginning with figures for 1941, OPA collected profit and loss statements and balance sheets from corporations on so-called Form A which called for a break down of receipts and expenses. Between 1941 and 1945, approximately 21,000 different corporations filed one or more years' profit and loss and balance sheet figures with the OPA. Of this group of corporations, 5,000 filed reports for each of the five years, which data are now being put on punched cards.

(b) Following out an executive order, the Bureau of Internal Revenue supplied to the OPA for the years 1936 through 1943 the same data from each of 75,000 corporate tax returns as are turned over to the Statistics of Income Division of the Bureau. Hundreds of compilations were made of the data from these income tax returns, usually for narrowly defined industries. The branch which handled this work has now been transferred to the Federal Trade Commission.

(c) In connection with operations, particularly when investigating the need for ceiling price changes, price branches frequently supplemented both BIR and Form A earnings data by field investigation or correspondence. These data, which are in operating section files,

show earnings of a considerable number of narrowly defined industries for the period 1936-39 and for one or more later years. Such studies contain the best profit data in the sense that the consistency in accounting methods from year to year has been checked and often the accounting method itself changed to coincide with the principles applied by OPA accountants. Furthermore, where summaries by industries were made, they represent more carefully selected samples of finely classified industry groupings. In addition to industry studies thousands of firms who petitioned for individual adjustment of ceiling prices filed profit data for 1936-39 and one or more later years. In some cases, particularly in machinery, and in some other parts of the industrial goods area, these reports have been carefully checked.

(2) *Profit Data for Departments or Divisions.* For a limited number of industries and in connection with a large number of individual adjustments in the metal-using industries OPA collected departmental or divisional profit and loss statements for 1936 through 1939 and for one or more later years. Among the industries for which data of this sort were collected are automobiles, a large number of machinery manufacturers, breakfast cereals, meat packing, electrical appliances, evaporated milk, rubber tires, and lumber. While it is understood that departmental statements involve allocations of overhead, they may be used to show change over time, particularly where corporations have separate plants for which separate income statements have been kept for some time.

b) *Distributive and Service Trades.* OPA carried out several field studies of earnings of the distributive trades, particularly of those about whose operating results relatively little was known previously. Among these are grocery wholesalers, independent food retailers, drygoods wholesalers, appliance distributors, appliance dealers, automobile dealers, farm machinery dealers, lumber and building materials dealers, and small furniture stores. Less extensive studies usually on a regional basis have been made of some of the service trades, notably laundries.

c) *Summaries of Profit Data.* Several studies of corporate profits have already been released by the OPA Research Division and others will be out shortly. These reports are based on BIR and Form A data, and usually present profits for fairly broad industry groupings for the years 1936 and following. Among those yet to appear, however, is one which places the BIR data on a comparable basis for each of the years 1922 through 1941. Another will present profit data for 2,500 identical corporations for 1936 through 1945. A third will show for the same period a break down of the food and the textile and apparel fields profits data into quite fine industry groupings. These reports

are in addition to those which will be forthcoming from the Economic Data Analysis Branch.

2. Cost Data.

a) *Manufacturing and Mining Industries.*

(1) *Break Down of Over-all Expenses.* When making an industry study and in thousands of individual adjustment cases, profit and loss statements providing a break down of cost of goods sold were ordinarily gathered for one, or at most two, recent years. OPA has relatively little information about the components of total cost for the period 1936-40, even on an over-all company basis, aside from transcripts of the quite unsatisfactory BIR data on costs. In field accounting studies, total operating expenses for 1936-39 were not examined with care, and break downs were not recorded because the interest was in profits before taxes.

Beginning with 1941 data, however, the situation was quite different. Form A on which thousands of firms filed operating statements for 1941 through 1945 called for a break down of total operating expenses into its major components. Because of uncertainty as to whether respondents used the classification of costs called for by the form, or whether particular respondents used the same classification in successive years, these data can be used only for purposes such as changes over time for fairly broad groups of firms, which will not be affected materially by these uncertainties about the data.

Where OPA accountants have collected the data directly as part of a study of an industry, they obtained, and checked, for one or more years the break down of total operating expenses. In a large part of such cases this break down was obtained for 1941 or 1942, and, for recent studies, for one later year also. From these cost records, labor costs as a percentage of total costs could be determined. Such quite accurate and fairly detailed data for one or more years were obtained for a substantial part of the manufacturing industries. However, the extent of the break down of total expenses and the classification of expenses varied widely between studies. In some cases, for example, general, administrative, and selling expenses were grouped in one item, while in other cases this item would be broken down so that such separate charges as outbound freight and advertising were segregated. Again all factory labor was put as one item in some studies, while direct and indirect labor were segregated in others and in some cases it has not been possible to get the same classification of even labor costs from all firms. In a few cases major items of direct materials were segregated.

(2) *Break Down of Departmental Costs.* In a limited number of

industries, OPA obtained a break down of divisional or departmental expenses. Often these departmental data fit a single commodity or a group of related commodities. In the 1945 review of ceilings established in 1942 for the electrical appliance and automobile industries and in a few parts of the food field, for example, such data were obtained for 1941 and often for a more recent year, but rarely for 1936-39. Data of this sort were also collected in individual adjustment cases, particularly for industrial products. The observations made with respect to the break down of over-all company expense data apply also to departmental data with, of course, uncertainty added by the presence of allocations and interdepartmental transfers. Nevertheless these data, particularly where the company had ordinarily prepared such statements, are useful for showing changes over time in the items of cost such as labor or materials cost. In a number of these studies, particularly in the hard goods field, a detailed breakdown of "bill of materials" for 1941 was obtained.

(3) *Product Costs*. For a limited number of commodities, among which were processed fruits and vegetables, steel, industrial alcohol, rubber tires, vegetable oils, fractional horsepower motors, and cotton textiles, OPA's accountants obtained unit costs for particular products. A unique set of cost data are those for nonferrous mines gathered in connection with the premium price plan. In most cases the study covered costs for one year only, which was usually a wartime year, although for cotton textiles 1936-39 and 1941 costs were obtained. Such wartime data can sometimes be adjusted with sufficient accuracy to portray differences in costs among products, or even to indicate 1941 or 1946 costs.

b) *Distributive and Service Trades*. Paralleling the data on profits for the distributive trades was the collection of over-all store-wide costs for several years. Likewise a limited amount of cost data were obtained for the service trades.

c) *Summaries of Cost Data*. As part of the statistical tabulation project, the cost data are being combed to determine useful summaries which can be made, in light of the limitations of the data and of staff available for analysis work. After re-examination, some of the data on unit costs—*averages, variation within the industry, relation to size of plant, and movement of cost with volume changes*—will be released.

"Bills of materials" which are particularly important in the hard goods field, and, if possible, changes between time periods in labor cost and other components of cost will be presented in summary form.

Cost data involve all of the uncertainties of their origin—adequacy of records, methods of allocation, and outright manipulation. Although much of these cost data are no more limited in these regards than is most cost information, these data offer the most promise in connection with

analyzing the characteristics of an industry, the degree of integration of various firms in an industry, the differences in cost of bulk and packaged goods, differences in plant costs of the same firm, or changes in cost of the same plants over time. Only rarely, and then only after a most careful understanding of the limitations of particular data and of the accounting methods used, could the cost data from multiline firms be used as a measure of total cost to be compared with prices.

3. *Balance Sheet Data.* Wherever over-all company profit data were obtained, balance sheet figures were also requested. As a result the coverage—the number of years for which data are available, and extent of tabulation of balance sheet information—parallels that reported above with respect to the profit statistics.

4. *Price Data.* As a maximum price-control agency, OPA would be expected to have a vast amount of price information in its files. This is true, but in spite of the fact that at one time or another the OPA instituted ceilings on practically all commodity and many service prices by the device of freezing them at the level charged in a designated period, the agency did not find it necessary to collect these prices for many commodity areas. Much less information of a primary sort was collected about price changes during the period preceding control.

Among the areas for which a sizable volume of price data was collected are the following:

a) *Retail Price Filings.* Retailers and several of the service trades were required to file with the local war price and rationing boards the maximum prices charged in March, 1942, for a specified "cost of living" list of commodities and for certain services. Analogous registrations of residential rents in areas under rent control were required.

The accuracy of these commodity and service trade filings as an absolute measure of prices varies among commodities and types of sellers. Laundry price lists could not be altered before filing them, but service charges for radio repair might be. Doubtless thousands of retailers filed prices computed by adding customary margins to replacement costs of June or July, 1942—the months when the filings were taking place. By this method these retailers relieved themselves of the "squeeze" resulting from the simultaneous freezing of prices at all levels at a time when prices generally were moving upward. However, later examinations of margins on particular commodities showed that not all squeezes, particularly those thrust on the chain stores, were relieved in this fashion.

In spite of some limitations these price filings can be used with confidence to compare prices in different sized communities and in different regions at a given point in time. Possibly some comparisons

can be made among prices charged by different types of stores, although the investigator would have to be concerned about the varying degrees of "self-help" in the way of avoiding squeezes which the respective types of stores may have carried out. These "cost of living" price lists for 100 selected communities will be turned over to the Bureau of Labor Statistics.

b) Although no general requirement of filing base date prices was imposed on manufacturers or wholesalers, OPA did gather a large volume of price data for late 1941 and early 1942 which covers a large part of all manufacturing. A number of specific regulations require the filing of "highest prices charged" to each class of buyer in a specified period together with all discounts and allowances. Often this requirement was part of plans for flat-pricing the commodity. Sometimes the filing, perhaps in the form of catalogues and price lists, was part of an enforcement program.

Among the areas in which manufacturer price data are extensive are: consumer durable goods generally, work clothes, processed fruits and vegetables, rubber products (including tires), breakfast cereals, and steel.

c) In connection with "new model" and "changed specification" pricing, the applicant (a manufacturer) was required to file the freeze-date ceiling price of the item most comparable to the new model for which ceiling price approval was requested. Then in order to facilitate the administration of approving ceilings for "new products" for a seller by "in-lining" with old manufacturers of the product, which process is distinct from "new model" pricing, there was acquired a large accumulation of manufacturers' 1941 or 1942 catalogues, particularly in the consumer durable field. In other areas where this method of pricing was used, but where catalogues are not issued, as in work clothing, ceiling prices of "competing manufacturers" were obtained by correspondence.

d) When OPA accountants visited firms for the collection of product cost or financial data, they ordinarily obtained the firms' ceiling prices and sometimes prices for earlier periods for the commodities under study. These represent among the most accurate price data obtained by OPA.

e) When a manufacturer applied for an individual adjustment, he was required to file the ceiling prices from which relief was requested. In addition, thousands of letters which were not formal petitions for relief contain price information.

f) Special studies of prices and price movements were made for some industries which covered several months or even a year or more immediately preceding control and utilized price information obtained

directly from industry. Often only the crude data are in the files; in other cases some summarization and analysis has been made.

g) The Bureau of Labor Statistics made a number of special tabulations of its wholesale price data for the use of the price control agency. Copies of such summaries are in the OPA files.

h) Finally, actual "recoveries" or "realizations" on certain products were obtained for a few industries, which show what the sellers actually received as influenced by prices and discount structure—and the departures therefrom. Data of this sort are available on some vegetable oil products, lumber, bread, breakfast cereals, and some cotton textiles. The bulk of these data apply to 1942 or a later year, but for the commodities noted the data are available for 1941 and sometimes for other years prior to control.

Included as part of the price data obtained from an industry were the terms of sale—the prices or discounts allowed to various classes of buyers, the quantity and cash discounts, advertising allowances, and the geographical area to which the price applied.

5. *Margin Data.* For both distributive trades and manufacturing, OPA obtained data on gross margins of the following types:

a) Most profit and loss statements which break down total expenses, or provide product costs, provide gross margin over direct materials, over direct cost, or over factory cost. In some cases, such as in apparel price control, particular attention was paid to margin over direct costs.

b) The more unique over-all gross margin data were those obtained from those distributive trades for which little data had been available previously. Such store-wide gross margins were obtained for over 600 independent food retailers for 1941, 1943, and 1945, for a sample of wholesale grocers for 1941 and 1943, for music stores for 1941 and 1944, and both initial and realized margins of wholesale and retail appliance dealers, automobile dealers, farm machinery dealers, and some other types of outlets for 1936-39, 1941, and either 1944 or 1945.

c) Wholesale and retail margins on particular commodities represent one of the largest bodies of data gathered by OPA. One large group of margin data is that for dry groceries at wholesale and retail, which were obtained by the Bureau of Labor Statistics in 1942 when some particular margins were distorted by "squeezes" arising from the simultaneous freezing of most food prices at all levels except at the farm. A second group of margin data for apparel, furniture, and house furnishings at retail was collected in part by BLS in 1942 but consist principally of two filings of margins by retailers in 1943 and 1945. The filed margins, which were edited and in some cases checked by the OPA field staff, appear to be less distorted by wartime developments than were the food margin data. The data from a 5 per cent sample of the

stores, plus the filings of all large stores, have been placed on punched cards and a number of summaries has been made.

Retailers who had practiced "central pricing" or charged uniform prices for a region or for the company as a whole, could, upon presenting evidence of such practice, continue to do so under ceiling price control. Likewise firms who had not followed this practice but who wished to adopt it could do so if they could show that higher retail prices on the average would not result. Therefore the OPA Central Pricing Section obtained a large amount of chain store margin information. In a somewhat similar fashion, companies who could show that their product had actually been "fair traded" could have the fair-trade price substituted for the "freeze price" of retailers handling the product.

In addition to these comprehensive sets of data, OPA has wholesale and retail margin data of varying degrees of completeness which refer to the sale of a surprising variety of goods from bathing caps to electrical wiring materials. In the hands of careful research workers many of these data seem to be usable and in total they give margin information on a large part of all goods sold.

6. *Wage Rate and Labor Cost Data.* OPA collected wage rate data under three circumstances. As a means of reviewing the 1941 or 1942 ceiling prices of goods which had been off the market during the war or where for other reasons 1944 or 1945 costs were not a satisfactory guide to appropriate ceiling prices, OPA projected costs from 1941. In doing this the agency collected data from firms in these industries on both the increase in basic wage rates and the increase in straight time hourly rates. Then in a number of other areas, notably in machinery, increases in wage rates were collected to compare with reported increase in labor costs. In addition, data on wage rates are contained in much of the agency's correspondence.

Only in a limited number of cases does OPA have labor-cost data for particular products for more than one year. Company-wide data on direct labor, or all factory labor, as a percentage of net sales is available for a number of commodity areas for two or more years. However, except for single-line firms, such percentages are so affected by changes in what the firm produces that it does not show a change in labor cost per unit of product. Where labor cost per dollar of sales is useful for the purpose at hand, OPA records will be of some aid.

7. *Production, Sales, and Distribution Data.* Incidental to both price control and rationing, OPA collected a large amount of data on what amounts of certain materials are used by various industries. Likewise, much information was obtained directly from industry on product and channel of distribution patterns. Even where only industry esti-

mates were available they may be sufficiently accurate for some purposes. Included in data on output pattern would be not only production by products but also by packaged versus bulk. In sales pattern, there are at times data on institutional versus consumer sales, on private label versus sales under the manufacturers' brand, and on areas of distribution. Altogether much of the data for a picture of what the manufacturer buys and from whom, what he makes and to whom he sells, is portrayed for many industries in a far more precise fashion than can be got from published, or even unpublished, census materials.

C. *Nonquantitative Information.*

1. *Trade Practice Information.* Whenever OPA acted other than to freeze prices, and often then in order to know the impact of a freeze, the agency had to obtain information on trade practices: why so many models are offered, how frequently models are changed and prices subject to review, the role of periodic markets or showings of merchandise, the extent of use of brokers, practices on returned goods, how orders obtained by field salesmen are handled, whether grades or specifications are used in pricing, how imports and exports are handled, etc. On such points as these enough information had to be obtained to set dollar and cents prices at one or more levels, frequently specify trade and quantity discounts, and specify who pays the freight. In fact, where a regulation specified certain trade practices, and where the industry seemed to have lived tolerably well for four years under the regulation, this would be presumptive evidence that the regulation's requirements fitted the trade's practices.

2. *Information About Methods of Arriving at Prices of New and Altered Goods.* Several thousand firms, chiefly in the industrial goods area, whose business calls for developing numerous adaptations of a basic product, such as castings, mechanical rubber goods, and machinery generally, were required to file the "pricing method" they applied to such cases in 1941. Usually the price was arrived at by some multiple of estimated direct labor or direct cost. In some cases over-all and departmental profit and loss statements for 1941 were also available for these companies which could be compared with pricing method. In other areas correspondence (or proceedings of industry meetings) would show how a new item was priced in the past, or would be priced in the past, or would be priced during the war, if permitted to do so. The same sources show reactions to OPA's general disapproval of price increases following cost increases, to plans for rearranging or not rearranging prices of various products or of the several price lines in a product line.

3. *Memoranda and Reports.* Back of many price actions were eco-

conomic briefs which explained the structure of the industry and its prices and the business practices followed. Often the important segments of the industry are isolated and the impact of current developments on them portrayed. In some cases these briefs approach the quality of graduate theses. Among the more valuable of these briefs are those which deal with little known industries, such as various waste material industries, tire recapping, or abrasives, where an unusually large part of the information used, including the statistical data, was obtained directly from the industry. Furthermore, briefs included an accumulation and analysis of already available information, together with a summary of the relevant features of the technology of the industry. Often the gist of these economic briefs was contained in the published "statements of consideration" which accompanied the price action. For a limited number of commodity areas, historical monographs will contain a summarization of economic materials bearing on the industries involved.

4. *Operating and Policy Records.* Of course the files contain the usual operating records. In addition memoranda dealing with policy problems, containing policy decisions and commenting on particular price actions, describing developing problems in particular industries, and covering or referring to interagency relations form a sizable part of the files of the higher offices of the agency. Unfortunately, however, OPA did not formalize its internal operations as much as did some other agencies, so as a result, notes and memoranda reviewing policy meetings are rare; many discussions and even decisions were oral.

5. *Miscellaneous.* Scattered through the OPA files is miscellaneous information of a variety that encompasses almost every aspect of business. Some adjustment cases contain much of the life history of the applying business. Some business policy decisions on expansion, pricing, sales, or distribution methods, product lines, etc., are described and the consequences of the decision portrayed. Phases of the history of industries were argued in trade meetings. Rivalries between industries or among segments of a trade were sometimes aired in industry meetings or described in memoranda based on interviews.

The development of and experience with certain business and economic concepts such as "product," "item," "industry," etc., may be useful to those engaged in either theoretical or empirical research. In a similar fashion, methods used for classifying stores, fixing maximum margins, classifying costs, etc., may be of interest to research workers.

II. *Some Types of Research Projects for Which OPA Materials Would Be Useful*

The following list of fields of economic inquiry for which OPA

records might be useful is not meant to be complete. Furthermore, as a result of segregating areas of study according to the focal point of the investigation, there is overlapping among the fields suggested, and the extent to which the OPA files will be helpful for particular studies will vary from providing only supplementary evidence to being the major source of information.

A. *Studies of the Wartime Economy and of Economic Controls.* For studies of the wartime economy or of the more narrow subject of the efficacy of price control and rationing policies and techniques, generally or for particular commodity areas, the OPA records would be a basic source of information.

B. *Intensive Studies of the Organization of Particular Industries.* For intensive research into the organization of particular industries—sources of supply, character of costs, lines of product, channels of sale, plant locations, and history of the industry—OPA materials for a number of narrowly defined industries make possible a more precise and intimate portrayal of the essential characteristics than is possible from census data (including unpublished census materials) or other sources of information. The commodity areas for which OPA materials of this sort are extensive include: processed fruits and vegetables, edible vegetable oil products, tobacco products, breakfast cereals, cotton textiles, electrical appliances, floor coverings, rubber tires, automobiles, farm machinery, steel, lumber, and building materials. Commodity areas for which information is less complete include apparel, shoes, malt beverages, meat packing, jeweled watches, and furniture.

C. *Intensive Studies of Price Policies in Particular Industries.* In addition to materials on industry organization which in themselves are essential for research in price policy, other basic information for the study of price policies such as price structure and product differentiation, cost characteristics, differential profit experience of firms in the industry, and business practices, including resale price maintenance, are available with sufficient accuracy and detail to form the core of research on price policies for many industries. Among commodity areas where this information is most extensive are tobacco products, breakfast cereals, edible vegetable oil products, electrical appliances, floor coverings, rubber tires, cotton textiles, and work clothing. Less complete but valuable information of this sort is available with respect to such industries as furniture, men's apparel, a variety of grocery specialties, processed dairy products, leather shoes, and rubber footwear.

D. *Research of a Particular Phase of Industry Structure or Price Policy for a Number of Industries.* As distinct from intensive studies of structure and pricing in particular industries, research workers who are making a comparison among a number of industries of a phase of

industry structure or an aspect of price policy will find in OPA files much relevant information on a large part of manufacturing. Some of this information can be found in memoranda and briefs. Where it is necessary to go to basic records, some types of information, such as facts on the trade discount, use of list prices, and geographical price practices, can be gleaned fairly rapidly. Less plentiful and less easily dug out would be such information as prices for private label as opposed to manufacturers' brands, the volume of sales by distribution channels or indicators of price leadership.

E. *Research into the Distributive Trades.* Because so many of the research areas referred to here are pointed toward the manufacturing industries, most of the material bearing on the distributive trades are brought together under this one topic. OPA files record much about the organization, margins, costs, profits, sources of supply, and competitive position of various distributive trades, and shows some effects of the war on the distribution process. OPA materials are most abundant with respect to consumer goods—food, apparel, furniture and house furnishings, electrical appliances, and automobiles.

F. *Studies of Vertical Relationships in the Economy from Raw Material to the Consumer for Certain Sections of the Economy.* OPA materials portray much of the institutional characteristics, costs, price relationships, and trends in the vertical structure of industry and war effects thereon. Furthermore, because of the detailed breakdown of costs, including materials costs, for a number of products, or product groups, together with a fairly clear picture of vertical relationships of the various levels between raw materials and the consumer, some studies of the vertical flow of goods and reverse flow of payments could be carried out by use of these data. Examples would be apparel, food, furniture and house furnishings, automobiles, and appliances.

G. *Profit Studies.* Analyses of the profit record of firms, classified on several bases such as by size, by type of products, by character of price structure, or by degree of vertical integration may be made for a considerable part of the economy by use of OPA data. If the researcher will utilize the qualitative material in OPA files he may be able to avoid pitfalls which sometimes mar such analyses. By becoming familiar with what firms produce, how they sell, what lines are most profitable, etc., a more reliable analysis can be made than by simply throwing firms together just because they produce similar goods in part.

H. *Cost Studies.* A limited amount of the information needed for certain types of cost studies could be drawn from OPA records. Unfortunately the data bearing on the relation of change of volume rate and unit costs is not extensive and in some cases was distorted by war-time influences. Data on the relation of size of plant or firm to costs

are more abundant and some of them are being summarized. In some instances geographical differences in costs would be compared with price differences. Here and there increases in labor costs for specific products can be compared with changes in wage rates. Most frequently, the investigator would have to be content with change in labor cost as a percentage of total cost or net sales for business as a whole, which data may be useful for some purposes but not for the ordinary productivity study. Data on manufacturers' distribution expenses, usually in great detail for one year only, may be useful for studies in that area. There is, however, considerable variation in the extent of break down of these costs and there is not uniformity in classification among industries surveyed.

I. *Studies of the Competitive Position of Firms.* In a number of industries the competitive position of firms as shown by their profit record and related indicators of success could be related to the price policies, sales policies, product lines, degree of integration, and size of the firms.

J. *Regional Studies.* Research on that part of an industry located within a region, or a study of the economy of whole regions, could be facilitated by the use of OPA information, not only in the sense of primary data about that part of various industries which is located in the particular region, but also by OPA's studies on and experiences with geographical differences in the structure of prices, business practices, and perhaps in costs.

K. *Studies of Comparative Living Costs.* For geographical and size-of-community comparison of prices and living costs and, in particular, their relation to pricing policies of manufacturers and to distributive margins, OPA's records contain much new material.

III. *The Use of the Records: A Proposal*

It now appears quite certain that practically all of the useful information in the OPA files will be preserved and be turned over to the National Archives. Furthermore the plans call for storing at least most of the preserved files in the Archives Building.

Although the OPA staff, in the dying days of that agency, have sorted their voluminous files according to instructions and placed them in folders under a system of identification, the work is being done in such haste and with such inexperienced personnel that one cannot expect that the files will be arranged in an ideal fashion. Furthermore even after this job is finished, months will be required to transfer the numerous truckloads of boxed materials to the Archives Building (including the shipment of field records to Washington) and to arrange the file boxes in Archives' stacks.

These are time consuming mechanical steps in making records ready for use: they are minor compared to the troublesome question of who may use these records. Information about an individual firm's business—costs, profits, sales, production margins, discounts, prices (except retail), etc.—is confidential. In no event may data about an individual company be disclosed by those who have access to the records. At this writing no definitive decision has been reached concerning who may legally have access to these records. The status of the personnel of most governmental agencies—those without the right to subpoena records of business—is similar to that of individual research workers. There is reason to hope that the administrative rulings based on the relevant statutes will be favorable so that, with proper safeguards to prevent misuse or disclosure of confidential information, responsible persons engaged in objective research may have access to these records.

Considering both physical and legal difficulties of getting access to these records, the subcommittee has concluded that only limited use of these materials will take place unless steps are taken to put the information in a more easily available form. Therefore the subcommittee recommends that a sizable project be set up for the purpose of drawing the more valuable information from these records which should then be published in the form of a book of research materials. Only in small part would the book consist of edited materials from OPA files; in large part it would consist of summaries of quantitative information, portrayals of relationships, and concise statements of qualitative evidence found by the staff of the project. In statistical summarization, it would go far beyond the present data analysis project, particularly in analyzing data bearing on price making for particular commodities.

The committee urges that two steps be taken: First, a determination should be made as to whether a nongovernmental research agency could undertake such a project in light of the restrictions on access to these records. Second, after a conclusion has been reached on this point, a decision should be reached as to whether a governmental or nongovernmental agency should undertake the project. Then formal steps should be taken to interest appropriate agencies. A more detailed description of the proposal, together with an estimate of personnel needs and some tentative suggestions of method for carrying out the work, has been submitted to the Research Committee of the Association.

WAR AGENCY RECORDS CONCERNING PETROLEUM AND SOLID FUELS¹

Our initial task has been to determine the scope and content of war agency records bearing on fuels, and the extent to which they may contain statistical and other data potentially useful in economic research. We have by now secured a concise summary and analysis of the coal and petroleum records of the Office of Price Administration, exclusive of materials on rationing, together with certain generally available information on related records in the Bureau of Mines and other permanent agencies. We are currently trying to arrange for similar inventories of the surviving records of the Petroleum Administration for War, the Solid Fuels Administration for War, and other war agencies.

The most promising body of material on hand in the OPA files concerns bituminous coal. For the bituminous coal mines of the United States there is, according to our information, a practically complete file of monthly reports, from August, 1943, to September, 1946, covering production volume, costs and their components, and sales realization. Such information is available for individual mines, and also in monthly, quarterly, and annual summaries and in various work sheet analyses. Data on new mine openings are also available. When these OPA data are taken in conjunction with similar data for the period from 1938 to 1943 in the hands of the Bituminous Coal Division of the Interior Department, we have a continuous and detailed record, extending over almost a decade, of production, cost, and price data for the individual firms of this extractive industry.

The considerable research potentialities of this mass of data seem quite obvious. The bituminous coal industry has been of salient importance in the American economy for more than a decade. It has been something of a leader in price and wage policies, a principal arena of industrial unionization, and a major industry operating under the protection of minimum price control. If the data referred to were taken together with what might be secured from other sources, they could provide the basis for a broad and penetrating economic inquiry. This might consider not only such relatively technical matters as cost-price relationships and their movement over time, but also the impact on price, output, cost, and efficiency of the sequence and combination of minimum price fixing, strong union pressure on wages, and wartime expansion. Much of the relevant material is preserved in the records of permanent agencies. A significant and perhaps strategic increment

¹ The members of the Subcommittee on War Agency Records Concerning Petroleum and Solid Fuels are W. E. Hoadley, J. P. Miller, and J. S. Bain, Chairman.

to that material, however, is found in OPA records. Our subcommittee therefore urges that the OPA file on bituminous coal production should be maintained intact until appropriate research use of these data can be arranged. We take this opportunity to call the attention of interested parties to this unique and valuable file of information on an industry which has regularly posed important problems of public policy.

Mention should also be made of OPA records pertaining to anthracite coal mining and to the retail distribution of coal. On anthracite mining there are data similar (with minor exceptions) to those available for soft coal and extending from 1941 to September, 1946, together with periodic summaries. Although these anthracite records are not so extensively backed by records antedating the OPA as are the soft coal records, they offer a possible basis for research on output, cost, price, and profit relations in the anthracite industry, with particular attention to the effect of differences in the situation and size of firms and of various changes over time in other price determining variables.

Data on the retail distribution of coal are of a more fragmentary nature. There is, however, for a sample of about two hundred coal dealers, a file of returns showing sales, expenses, and profits from 1941 to 1945. These returns have been tabulated. In addition, of course, there is a volume of documentary and statistical material bearing on the fixing of dollars-and-cents ceilings for individual areas. Although there are probably not enough statistical data here to serve as the basis for a broad survey of coal distribution, some interest might attach to a case study of the fixing of retail coal prices, based on the available material. We feel that the nature of the data available should be brought to the attention of economists.

The materials available on the petroleum industry are voluminous and more various, but on the whole much less encouraging to the potential research scholar. This is largely because there are no complete running series of basic statistical and accounting information. Most of the statistical data are contained in a large number of reports and studies prepared for special purposes, and individually limited in coverage to certain time periods, geographical areas, or groups of firms. It may be nevertheless useful to review briefly the main categories of information available.

One body of material includes the transcripts of a number of meetings held by OPA with various groups of petroleum industry representatives between May, 1941, and June, 1942. These meetings concerned various issues raised by the imposition of price control and its adjustment to developing war conditions. This file is supplemented for a later period (1945 to 1946) by a number of reports, some including statistics of cost, submitted by industry advisory committees. These files should

furnish a useful mine of information for the student of the workings of wartime price regulation. Of similar interest is a file of reports, briefs, memoranda, and so forth submitted by industry sources, ordinarily in support of special pleas for various adjustments. These usually contain cost and profit data of some sort, but they generally apply to limited groups of firms, geographical areas, and periods of time. Although the statistical record contained here is extremely fragmentary, some of the fragments may reveal information of a sort not ordinarily available. Finally, there are the results—most of them tabulated—of a considerable number of surveys conducted by OPA on such subjects as the earnings of integrated companies, costs and prices in fuel oil distribution, profits of crude oil production, and refinery costs and margins. These are supplemented by a number of tabulations of the financial data of various groups of firms, mostly for the prewar period and drawn principally from internal revenue sources. For limited time periods, areas, and samples of companies, there are a good many data here which have not been generally accessible and which would be very useful in a general analysis of the petroleum industry. Except for the financial data from tax sources, however, there is a lack of complete coverage and of continuous series, and many shortcomings resulting from failure of firms to reply adequately to questionnaires. A comprehensive study of petroleum prices and costs could probably not be supported by this file. However, there is some information which would probably be valuable to a student who could draw heavily on other sources.

After calling attention to the nature of these petroleum records, it is not easy to formulate recommendations for their preservation and use. Additional research on the price-control experience of the war period will undoubtedly be undertaken, and deservedly so. For such retrospective analysis in the area of petroleum, the complete file described is the main source of primary data. For economic analysis of contemporary or more general orientation, at least some of the statistical surveys described would be useful, but they would require much supplementation.

The preceding brief outline of the content of OPA price records on fuels has presented our general ideas on the utility of these records in research. Very active encouragement of early use of the materials on coal production seems desirable, and some further consideration of the appropriate use of petroleum records is probably in order.

The subcommittee has considered the desirability of facilitating the use of the coal data by securing the co-operation of a responsible research foundation. Such a foundation might prepare comprehensive

WARTIME MATERIALS IN THE FIELD OF LABOR¹

The Subcommittee on Labor was instructed by the Chairman of the Committee on Research "to canvass the available materials [of the various agencies concerned with labor in the war program] . . . to describe them to the members of the Association, and to tell them how they can be used most profitably." The Chairman also expressed a desire that the subcommittee discuss the research needs of scholars and make whatever suggestions it might care to for the advancement of economic research in the field of labor.

The members of the subcommittee were unanimously of the opinion that we should not undertake to carry out the latter part of the instructions at this time. We were of the opinion that this is a subject which would require more thoroughgoing consideration than we would be able to give it, and we suggest the appointment of a committee which can study it more carefully and at greater length. Accordingly, we shall confine our attention to canvassing and describing some of the materials relating to labor which emanated from the various agencies, and to suggesting some of the uses to which they may be put.

Even so we can do no more than touch on them. Almost every governmental agency, both permanent and wartime, which had any part in the war effort was concerned, in one way or another, with labor. The most complete list of such agencies of which I am aware was submitted by the Director of the Bureau of the Budget to the Select Committee investigating the seizure of Montgomery Ward & Company. This list, together with a thumbnail sketch of the jurisdiction of the agencies and their duties, is to be found as an appendix to the Committee *Hearings*, and is set forth in nearly twenty pages of fine print.

The subcommittee had neither the time nor the facilities to explore the records of all these agencies. Consequently this report leans heavily on a compilation of agencies, their activities, and records which was secured for our use by Mrs. Arnyess Joy Wickens and Mr. Milton Derber of the United States Bureau of Labor Statistics. It is descriptive rather than analytical, and should be considered as a preliminary, exploratory survey. We believe this subcommittee should be continued, or another appointed, to achieve more fully the ends sought by the Chairman of the Research Committee.

The subcommittee was of the opinion, that to carry out the instructions of the Chairman, as thus delimited, it should attempt: (1) to indicate the principal agencies which were concerned with labor during

¹The members of the Subcommittee on Labor and Manpower Problems are L. G. Reynolds, R. A. Lester, W. R. Leonard, Clark Kerr, C. L. Christensen, W. W. Bakke, J. D. Brown, A. J. Wickens, P. A. Dodd, and H. D. Wolf, Chairman.

the war; (2) to indicate the kinds and general nature of the records, reports, studies, etc., got out by the various agencies, and their present location, if possible; (3) to note that all agencies, both permanent and wartime, are preparing histories, termination reports, etc., that these at present are in varying stages of completion, and when and if completed, will vary widely in scope and general usability; (4) to note the plans of the National Archives for the preparation of guides to the records of the various agencies which will "extend, supplement, integrate and make available the information about the records of the government's wartime experience. . . ."; and (5) to suggest some research areas and topics where we think war records may be used advantageously, and others which we think should be avoided by the individual research students.

It is obvious that it would be undesirable, even if it were possible, to list here those agencies found by the Director of the Budget to have dealt with labor during the war. Nor would such listing give any idea of the types of materials to be found in their files, or in the files of their successor agencies, or of the National Archives, as the case may be, except as might be inferred from the brief description of their activities.

A more useful list, although at present incomplete, is that compiled by Mrs. Wickens and Mr. Derber. This compilation not only lists the agencies and indicates their fields of activity but also sets forth in considerable detail the kind and content of records developed by them and where they are to be found. It is deserving of more extended treatment than can be given here. It is at present largely in typed form, although it contains some mimeographed and some printed materials, mainly bibliographical. If this compilation could be completed and published as a special bulletin or otherwise made available to students working in the field of labor, it would serve as a useful guide to agency materials, at least until the program of the National Archives is more fully developed.

Topics and Materials

One of the problems which the subcommittee faced was how to reduce the existing voluminous and heterogeneous mass of materials to reasonably manageable proportions. It was thought that perhaps both agencies and records might be approached by considering them in relation to the three broad fields of manpower, wages, and labor relations. We shall attempt, therefore, to suggest some possible areas of research within each of these fields, and to indicate some of the wartime materials which are available.

Before doing so, however, it may be well to distinguish between the individual research student—perhaps a graduate student concerned

with a doctoral dissertation—and a foundation or other organization equipped, financially and otherwise, to carry on research on a broader and more comprehensive scale. We are thinking here of the former type of researcher rather than the latter.

Such a student should avoid the temptation of attempting to write a history of an agency. Histories of agencies, as already pointed out, are now being written by people who had a part in their development and administration, and who are intimately acquainted with and have ready access to the records. Likewise, the subcommittee believes that the student in this field should concern himself with the functional rather than with the structural aspects of the various agencies. We especially wish to emphasize the desirability of careful studies of economic developments which took place in local areas. Not only is it impossible to measure the degree of success of a given program until careful, detailed studies of a local nature have been made, but the student will often find much of his essential data only in the local areas.

I. *Manpower.* Turning now to the field of manpower, a number of questions of a general nature having to do with such matters as recruiting, training, placement, and housing of workers suggest themselves. What were the manpower requirements of a given area? What was the supply and what was its composition? What were the sources from which additional workers were drawn? How much migration was there into and out of the area? What movements of labor went on between plants? To what extent was the wartime distribution of the labor force brought about by "normal" economic inducements, such as wage differentials, and to what extent by direct regulations through Selective Service and War Manpower regulations? Were the War Manpower controls really effective, or were there enough loopholes so that a man who was really determined to change jobs could do so? How successful was the use of prisoners of war in supplementing agricultural manpower needs? What about the use of foreign labor? What effect did the war have on the position of minority groups?

Answers to these and similar questions can be found only in part in the records of the headquarters or regional offices. The information secured there must be supplemented in many instances by going to the area office records, if and where such still exist, and by interviewing local officials. A great deal may be learned from company employment records, and from discussions with personnel people and union officials who watched and participated in the wartime program.

Another interesting area within this general field embraces the wartime training programs. How effective were these programs, the E.S.M.W.T. program, for example? Records in the Office of Education and in the files of the co-operating institutions would yield information

on numbers, types, and content of courses offered, numbers and composition of classes, etc., but to find out more about the effectiveness of the program—whether or not those persons participating in the program derived any substantial benefits, direct or indirect—it would be necessary to interview those persons, the instructors, and the local administrative officers responsible for the program. One incidental but very real contribution which this program made in North Carolina was the establishment of closer relationships between the industrial and business interests of the state and the co-operating educational institutions. This has carried over into the postwar period and holds much promise for the future. It is an interesting and important development in the life of the state, but it could not be discovered in the files of the agency either in Washington or in the local areas. This emphasizes further the desirability of careful area studies, and of supplementing official records with personal investigation.

The subcommittee was of the opinion that questions such as the foregoing might suggest fruitful areas or even topics for research in this field. If some such topic were selected, the topic itself might suggest the agency responsible for the program in which the researcher was interested. On the other hand, it might not. In any case he might find that he need concern himself with not one but with a number of agencies whose programs might have a bearing on his subject. To name only a few, the War Manpower Commission, the USES, the Department of Agriculture, the War Production Board, Selective Service, the Office of Education, and the War and Navy Departments were among the more important agencies whose programs were concerned with the broad field of manpower.

A. *War Manpower Commission.* Since the War Manpower Commission was the agency chiefly responsible for meeting the country's manpower needs, it has been selected to illustrate the nature of the materials which the research student might expect to find in this field. The language used here was cribbed, where possible, from the Wickens-Derber compilation, and is that of the agency itself.

Of the many series of reports of the War Manpower Commission listed and described in the inventory, only two or three can be mentioned here. And while the research student might have reason to consult the materials under the other headings, he would probably find those under *Basic Source Materials* and *Analytical Reports* of greatest interest and use.

1. *Basic Source Materials.* The basic source materials consist of, first, a number of different types of reports gathered from individual employers; second, activity reports of local USES offices; and third, *Manpower Utilization Studies*.

The basic report from which area and industry labor market development reports were prepared was identified as *ES-270-Employer Demand Schedule*. A detailed schedule was obtained once a month from each plant engaged in each of the more important war production programs. It included a full statement of the plant's recruitment problems, manpower needs, turnover, absenteeism, starting wage rates, etc.

A similar report was obtained bimonthly from about 18,000 employers and government establishments which were responsible for the bulk of the nation's war production, as well as from principal employers in nonwar production, manufacturing, extractive, or transportation industries. From these schedules a more detailed analysis of the manpower situation by production program and by important labor market areas was prepared for reference of procurement, production, and other war agencies. This reporting program included over 75 per cent of the total employment in all manufacturing industries, and about 99 per cent of total employment in aircraft, shipbuilding, small arms, and ammunition. Reports from many firms are continuous from 1941 to V-J Day, and are on file at the Washington office, in the state offices, and in the local offices in the communities in which the establishments are located. A biweekly report of schedules, collected from employers producing a highly critical "must" item who were behind in their production schedule or were threatening to drop behind because of manpower reasons, was issued during the last year of the war. These reports covered several hundred establishments, and ran from December, 1944, to June, 1945. They are to be found in USES headquarters and in most state offices.

These reports, together with the *Activity Reports* of the local USES offices, the *Monthly Report of Available Labor Supply*, and the *Weekly Interregional Recruitment Reports* should prove highly useful to the research student who is interested in local, area, and regional research.

The *Manpower Utilization Studies* were conducted by WMC utilization specialists seeking to maximize the productive use of labor and to strengthen worker morale during wartime. Full utilization surveys, which originated in "problem" plants important to the war production program, involved investigations of the impact of Selective Service withdrawals on staffing and continued operations, turnover, absenteeism, production methods, labor productivity, in-plant and out-plant conditions, personnel practices, plant organization, selection and assignment of workers, training programs, and management-labor relations. Over three hundred such surveys were made, approximately one hundred covering major establishments in large metropolitan areas. The coverage includes all types of industries and establishments such as shipyards, ordnance centers, airframe assemblies, modification

centers, as well as basic metal producers, machinery manufacturers, etc. These reports are generally very detailed and documented.

2. *Analytical Reports.* Among the *Analytical Reports*, those supplying area labor market information would seem of major importance. These labor market area analyses were prepared irregularly during the early part of the war, but appeared bimonthly after December, 1943. They covered some three hundred major areas, and, in addition to the demand and supply analyses of manpower, present and prospective, dealt with such matters as on-the-job training and in-plant personnel practices, and the impact of such factors as housing, transportation, and community facilities on prospective in-migrant job-seekers and on the local labor force. These reports furnished the basic data on changing labor market conditions from which the War Manpower Commission and other government war agencies, concerned with manpower in specific localities, developed and evaluated policies and programs.

II. *Wages.* A number of suitable topics, both general and specific, suggest themselves in the field of wages and earnings. What were the effects of the wartime wage policies upon the Southern textile industry? What were the economic effects of the wartime narrowing of intraplant differentials in selected low-wage industries? What was the influence of the War Labor Board on the internal wage structure of individual plants? On industry-wide wage structures? How did incentive plans, introduced during the war work out? What were the problems connected with the application of wage controls to seasonal workers in agriculture? What effects did the policies of the War Labor Board have on interregional wage differentials? To what extent and how were wage controls, which interfered with the manning of plants, circumvented? How adequate were the Bureau of Labor Statistics data for wage determination?

Many studies in this field might well be carried on into the postwar period. For example, problems incident to readjustments of wartime wage structures to "normal" wage relations. It appears that in some cases incentive earnings in war plants got entirely out of line with earnings in plants which continued on civilian production under OPA ceilings. Some of the latter plants, which had prided themselves on being wage leaders in prewar days, were down toward the bottom of the area wage structure by the end of the war. Wage structures are now probably moving back closer to the prewar relationships, but they are causing problems for both management and unions.

In the field of wages, the principal agencies responsible for the wage stabilization program were the National War Labor Board, the Treasury Department, the War and Navy Departments, the Department of

Agriculture and the National Railway Labor Panel. Other agencies, for example the War Shipping Administration and the Maritime Commission, collected and analyzed wage data in their respective fields. The normal peacetime fact-finding and research activities of the Bureau of Labor Statistics were greatly expanded during the war when it became the research agency for the OPA, the War Labor Board, the Army Air Forces, the Navy and the Maritime Commission, and other agencies to a somewhat lesser degree.

III. *Labor Relations*. The principal agencies operating in the field of labor relations were the Conciliation Service of the Department of Labor, the National Defense Mediation Board, the National War Labor Board, the National Labor Relations Board, and the labor divisions of the Army and Navy.

Among the many topics or areas of research in this field which might be profitably explored are the following: What were the postwar effects of wartime policies on labor relations, labor practices, and labor agreements in selected areas or industries? How was the area of collective bargaining affected in the National War Labor Board's decisions? How successfully did the joint union-management committees, promoted by the WPB, function in maintaining morale and harmonious labor relations and in stepping up production? What effect did the war have on the status of union leaders in the plant and community, and how far has this improved status been carried over into the postwar period? What methods were used at the plant level to ward off threatened stoppages, or to get production going again after stoppages had occurred? Here again, it will be noted, are opportunities for research which combine records of the war agencies with personal investigation in the local plants, areas, and industries.

A. *The National War Labor Board*. Since the National War Labor Board was of major importance in both the fields of wages and labor relations, to economize time only, its records will be cited to illustrate the nature of the materials to be found in these fields.

1. *Case Materials*. War Labor Board materials may be divided into two main categories—case materials and noncase materials. The former consists of the Prime Case Files for both voluntary and disputes cases of the National Board, the Regional Boards, and the several commissions. The Prime Case File contains all the information in a given case, whether dispute or voluntary, except the transcript of the hearings, if hearings were held, and the transcript of the executive session of the Board. This would include, in a dispute case, the certification by the Conciliation Service, the panel or hearing officer's report, the briefs submitted to the panel by the parties, the panel's recommendations, perhaps objections to the panel's recommendations by one or both

parties, staff analyses of wage issues, if wages were involved, and final Board action embodied in a directive order. The opinions of the Board members in major policy-making cases are especially deserving of attention.

The wage data in the Board's files, while often disappointing in a given case, offer a rich field for research. The data submitted by the parties, data collected and compiled by the Board and its agencies for bracket construction and other purposes, supplemented by the regular studies and special studies and surveys by the Bureau of Labor Statistics, constitute the most comprehensive and complete body of wage data to be found. This is not to say that it will satisfy all the needs of the researcher, but it seems safe to say that nowhere else will he find as much material, reduced to an average hourly and straight-time hourly basis for separate classifications of skills, plants, companies, labor market areas, and even industries and major segments of industries, as here. Much of it goes back to January, 1941, and even before, offering an opportunity for study of trends, comparisons as between plants, industries, regions, etc. The wage theorist as well as the student concerned with such specific topics as were suggested above will find this field well worth cultivating.

The files of the War Labor Board offer a no less fruitful source of materials for the researcher interested in the "fringe issues," as well as the strictly nonwage issues such as union security, grievance machinery, and innumerable other matters which give rise to disputes.

All prime case files of the National Board and the commissions have been deposited with the National Archives, as have all prime dispute case files and 10 per cent of the voluntary Prime Case Files of the regional boards. The remaining voluntary Prime Case Files of the regional boards have been, or will be, destroyed. Verbatim transcripts of National Board sessions and transcripts of all public hearings, as well as daily minutes of the National Board, the regional boards and commissions have also been deposited with the National Archives. Clearance must be obtained from the National Wage Stabilization Board before any of the above materials can be made available to the public.

2. *Noncase Materials.* Noncase materials, other than transcripts and minutes, include *Basic Board Documents* such as the various manuals, reports, and memoranda for the use of the Board staff, Bracket Summaries, Policy Development of Regional Boards, etc. Important among these documents are the *Wage Report to the President on the Wartime Relationship of Wages to the Cost of Living*, February 22, 1945; the *Report on the Activities of the War Labor Board in Carrying Out the Stabilization Program*, April, 1944, prepared for the House Committee on Banking and Currency; and the *Monthly Report to the Senate*

of the *National War Labor Board*. These materials, along with a considerable number of special studies have been sent to a large number of universities throughout the country and will be found in the National Archives.

A *Termination Report* of the National War Labor Board is now in preparation and it is expected that it will appear sometime this year. It will contain a comprehensive statement of the history and policies of the Board and will serve as a guide to the work of the Board. In the meantime, the *War Labor Reports*, published by the Bureau of National Affairs, is an invaluable tool to the student who wishes to use the War Labor Board records.

Conclusion

An attempt has been made here to suggest some appropriate subjects for research in the field of labor, utilizing war materials, and to indicate the general nature and the present location of the materials of two major agencies operating in this field—the War Manpower Commission and the National War Labor Board. What about other agencies and their materials? Where are they to be found? How is the researcher to go about locating them, getting some idea of what they contain, and gaining access to them?

The subcommittee has not obtained information on the materials of some agencies. It seems likely that some have done little, if anything, as yet, for various reasons, including the problem of declassification, to make their materials either usable or obtainable. Others—the War Production Board, for example, whose records are at present in the Office of Temporary Control—have done a great deal. This agency appears to have done a noteworthy job in selecting, screening, and cataloging its materials. Whether originated by or accumulated by the Board, this material has been filed as a unit regardless of the particular office in which it was initially filed. Records concerning labor in particular industries, such as aircraft labor, shipbuilding labor, etc., are filed with the subject industry, with labor centralized as a subdivision thereof. The entry to such material is through the index under particular industry subjects.

It was suggested above that the topic or area of study will probably suggest the agency or agencies to which the student will turn. An inquiry addressed to the records officer of the agency should give the inquirer considerable information about the kinds of records the agency developed and maintained, where they are, and how to go about getting them. If the agency has been terminated, its records will probably be in the files of the successor agency, if any, or of the National Archives. Whether the materials have actually been transferred to the National

Archives or not, the Archivist is in a position to know where the materials are and to give the inquirer considerable information about them. Inquiries addressed to persons who occupied or still occupy key positions with the agency should be a fruitful method of getting answers to these questions. Such persons would know better than anyone else the opportunities which the materials offer for research and their limitations.

The histories, handbooks, termination reports, etc., when available, might well be taken by the student as a starting point in his research. They will not only help orient him in the field in which he is going to work, but will offer helpful suggestions about the records and the basic data gathered and processed by the agency. They will also act as a guide to this material, for it must be remembered that it was not collected and arranged with the needs of the researcher in mind, but to shape policy and to administer the program for which the agency was responsible.

ECONOMIC RESEARCH OF INTEREST TO THE DEPARTMENT OF STATE

By WARREN S. HUNSBERGER
Department of State

I. The Research Organization of the Department of State

Among the numerous urgent needs of the United States Government during World War II was a large volume of information and interpretation with respect to foreign areas, international economic and political problems, and the current and prospective results of United States policies and actions. This need was extreme, both in immediacy and in importance, but there existed only a limited body of knowledge and understanding on these matters, and at first there was neither the organization nor the personnel ready to obtain the information and provide the answers required. Many of you took part in the energetic efforts of one or another government department or agency to provide the necessary answers in such forms as surveys, analyses, interpretations, estimates, and projections. All of you are familiar with the importance of this paper work to the procurement of necessary materials from abroad, the equipping and supplying of United States and Allied armed forces, the satisfaction of civilian requirements, the drying up of enemy sources of supply, the selection of economic targets for military action, and in fact to practically any strategic move.

At the time of the surrender of Japan there were organizations within many departments and agencies in Washington equipped to provide the type of answers required for policy formulation and implementation. There was also a wide realization of the fact that the foreign relations of the United States now require much more research than was being conducted during the years prior to the Japanese attack on Pearl Harbor. Such research is needed both for the current operations of the government and as protection against a repetition of the intelligence crisis that faced this country after Pearl Harbor. Economic research combines the features of strategic insurance value and current usefulness about as well as research in any field, since the very types of economic reporting and analysis that are most necessary for strategic security are in many cases also of most value in interpreting current problems and the effects of the various courses of action that are open to our government.

The Department of State was designated by the President to take over the personnel, files, funds, and some of the functions of certain wartime agencies or parts thereof, including the Office of War Information, the Foreign Economic Administration, and the Office of Strategic

Services. The Research and Analysis Branch of the Office of Strategic Services at the time of its transfer on October 1, 1945, was an organization of some eight hundred persons, including area specialists, geographers, political scientists, economists, anthropologists, and a variety of other specialists in research on foreign areas and problems. This organization became the nucleus of a new research organization that, after fifteen months of scaling down and reorientation, is now functioning as an integral part of the Department.

Central responsibility for research in the Department and for liaison with other departments, agencies, and organizations concerned rests with the Special Assistant to the Secretary of State for Research and Intelligence, Mr. William A. Eddy. Under Mr. Eddy are two offices: the Office of Intelligence Research, which engages in research, and the Office of Collection and Dissemination, which engages primarily in servicing functions. Within the first of these offices are five research divisions. Four of them deal with particular parts of the world; namely, the other American republics, Europe, the Far East, and the Near East and Africa. The fifth is the Division of International and Functional Intelligence, which engages in research on certain international and functional problems, to date mostly economic, supplementing the area work of the area research divisions. All five of the divisions mentioned focus attention upon conditions, trends, problems, and policies in foreign countries or in the world at large. These divisions do not do research on conditions in the United States. Neither do these divisions ordinarily direct their research toward past United States policy; such research is done in the Division of Historical Policy Research, which is part of the Department's Office of Public Affairs.

II. Research Needs of the Department of State

As the arm of the United States Government principally concerned with foreign policy, the Department of State has interests and responsibilities as broad as human experience; as deep as human suffering, ignorance, prejudice, and selfishness; and as extensive as the earth itself. There are few subjects not purely domestic or technical that bear no significance for the work of the Department. Because of this tremendous range, the Department is required to make decisions on a very wide variety of questions. Few questions can be answered without dependable and specific information. Many questions require in addition to specific facts an understanding of very complex backgrounds.

To provide the material essential to a decision on a complex question, especially one of major significance, requires considerable effort and often calls for reports and studies from foreign service posts, other government departments, and the research organization of the De-

partment to support the staff work of the divisions engaged in the discussions and negotiations leading to the decision. Needless to say, much of this work is done under extreme pressure, often with a good deal less background material than would be desirable. Much of the necessary background material is capable of just as successful assembly, organization, and analysis in the universities and other nongovernmental research organizations as in the Department of State or other government department or agency. It is a policy of Mr. Eddy, reflected throughout the research organization of the Department, that such nongovernmental research be encouraged as far as it is appropriate for the Department to do so. The remainder of what I have to say concerns the types of subjects and projects that are required and the possibilities of having such work done outside the government. The Department has no intention of doing anything that might amount to controlling or dictating private research. What is desired is collaboration, stimulation, and assistance.

The most obvious research need of the Department is for information about foreign areas. It is at times disheartening to realize how often basic information is lacking and how much work needs to be done before a satisfactory background can be built up with respect to many parts of the world. My own work concerns Japan, and I prefer to avoid stating how frequently we in the Japan Branch are unable to provide what is needed quickly, fully, or at all. This situation reflects no criticism of the able and tremendously energetic research analysts who struggle to provide the studies required. Rather it is a result of the fact that such work is basically new and that we as a nation simply do not yet have sufficient background in the study of this and many other parts of the world to be equipped with the knowledge and understanding required.

The general information needed, with respect to every part of the world, concerns such matters as geographic features and background; natural resources; population and labor force; economic structure, problems, and policies; ethnic and cultural background; political structure, forces, problems, and policies; international relations and diplomatic history; and biographical information on major personalities. With respect to each of these general categories it is necessary to have enough factual detail and sound interpretation to provide the background required for dealing with questions as they arise. In addition, there are special problems with respect to many parts of the world, in many cases problems with long and tangled histories.

I should like to place special emphasis upon the importance of American understanding of the Far East. This vast area of conflict, suffering, and rising nationalism contains half the population of the world.

The internal pressures are high, the antagonisms intense, and the potential menace to world peace serious. We need a great deal of research on this part of the world. Yet only a few Americans have even the tools with which to carry out such research. Very few indeed are the economists who can handle such languages as those of Korea, China, Malaya, or Indonesia, to mention only four areas.

During the war many young people got a good start on certain languages, of which Japanese is most notable among those of the Orient. But such study must be carried further if scholarship is to profit thereby. With respect to Far Eastern areas at least, most American economic research must for the present rest on English-language materials. For the future we must provide extensive language and area training in order to remove major barriers to understanding the areas.

In addition to studies on foreign areas as such, the Department needs research on a host of problems that are international in character. The economic profession has been dealing for a long time with international trade and its problems, with capital movements, and with numerous commodity problems. These and many other familiar problems are still with us today and promise to be sources of difficulty for a long time to come. Moreover, a number of new or apparently new problems now confront us, and all of these problems, old or new, are now affected by important new elements, especially the prospective role of international organizations. In addition, problems pertaining to areas under military occupation are arising constantly.

To be more specific, one problem of paramount importance in many parts of the world is economic development. This problem is of particular urgency in many parts of Latin America and in such areas as the Balkans, the Near East, India, Southeast Asia, and China. In these areas the major occupation is agriculture. Industry is relatively undeveloped, as are transportation and communications. The low standards of living associated with these conditions contribute much to political and social unrest. American foreign relations and world peace and stability are now so much affected by these conditions that the economic development of such areas is of great importance to the United States. Consequently, it is necessary for our government to know what type of economic development—industrial, commercial, financial, and otherwise—is feasible for each area; what capital is needed from abroad; what type of foreign trade development is implied, and how such foreign trade fits in with the prospective general development of world trade.

In order to answer such questions, a broad economic study of each area is necessary, including such reference to noneconomic factors,

for instance, political instability and social cleavages, as is necessary to reach a practical conclusion on which United States policy can be based. Narrower studies dealing with specific industries or aspects of the problem would be useful in providing new material. After the general pattern of development in a particular area is projected, it is necessary to give consideration to possible sources of capital and the timing of the capital movements and trade developments projected. If a developing area attempts to follow the example of Japan during the thirties in capturing export markets, our efforts at developing orderly international trade may easily be brought to nothing.

Facing directly the problem of international capital movements, we find a variety of questions on which study is necessary for the protection of United States interests. United States Government lending through the Export-Import Bank and United States participation in the International Bank for Reconstruction and Development and the International Monetary Fund, as well as the investment of private capital abroad, all involve many questions of United States policy on which the Department of State shares responsibility for decisions and some questions on which the Department bears primary responsibility. To decide these questions it is necessary to have all the pertinent information concerning each particular issue and concerning the implications for United States interests of each of the major possible decisions.

Another question is future uses of natural rubber. On the answer to this question hangs the fate of a major industry in Southeast Asia, to say nothing of other rubber-producing areas. Should vigorous steps be taken to curtail the redevelopment of rubber production in these areas in order to avoid a market collapse in a few years? Or is there room for large natural rubber production in a world where synthetics have shown their value and economy as well as their independence of vulnerable lines of supply?

Turning to problems of specific areas, there is need for serious consideration of the economic problems of the new Republic of the Philippines. The United States has a great interest and a substantial obligation in connection with this new independent state, and large sums of American money are being called for. What possible solution is there to the present agrarian unrest? What type of industrialization would be sound and how should it be timed and financed? What United States policy should be adopted with respect to the capital needs of the Philippines, the sources of capital, the emphasis to be placed upon private capital, terms of loans, and plans to insure against an assumption by the Philippines of obligations beyond their capacity to repay? The

Philippine Government is now independent and free to make its own decisions, but the economic problem of the Philippines is a very difficult one and the United States is deeply committed to assistance.

Japan is a much different problem in many ways, and, since my own work concerns Japan, I should like to go into more detail on this problem country. For many Americans, it is not easy to see that Japan's economic problem is of much concern to the United States. But, realizing that peaceful ways will take hold only when there are tolerable economic conditions and when Japan's social and political institutions are purged of their militarist and ultranationalist elements, the United States Government is fostering the development of peaceful and democratic institutions in Japan and is committed to affording the Japanese "an opportunity to develop for themselves an economy which will permit the peacetime requirements of the population to be met."

This economic objective refers to some seventy-five million people on crowded, rocky, islands very poor in natural resources and so mountainous that only about one-sixth of the total area can be cultivated. This land cannot support all these people directly, and a remarkably large volume of imports is required to satisfy only such needs as were satisfied during the years before Japan's aggressive war.

Japan must pay for these imports somehow, but what she has to offer is severely limited by her poverty in natural resources and the poor state of her capital equipment. Since the advent of nylon Japan has lost a large part of her market for silk, the only major prewar Japanese export not requiring imported raw material. The war saw Japan's farms deteriorate from fertilizer scarcity and her industrial plant deteriorate first through conversion and scrapping, then through war damage, and, since the surrender, through weathering and the effects of the Allied disarmament and reparations program.

Consequently, Japan can rely to only a limited extent on the factors of land and capital for her livelihood. She must turn to her plentiful labor for support. On the assumption that goods made with "cheap" labor will be accepted in world markets, she may earn required imports by exporting products manufactured in Japan from imported raw materials. She must pay her way by the value added by manufacture. Such a basis for earning imports requires a large amount of turnover with a relatively small margin.

The practical answers to this problem must in the first place be research answers; that is, no policy decisions can be made by our government until it is known what is possible and what each possibility means for the United States, for world trade, for the peace and security that we are determined Japan shall not again menace, and for the economic development of the Far East. An attack on this research prob-

lem has been started in the Division of Research for Far East. During the last few months, sections of a basic study on Japanese trade have been completed and distributed to a number of economists in various parts of the country. This study examines the quantity, value, and content of Japanese trade in 1930, 1936, and 1938 and projects Japan's import requirements to a "normal" year after the postwar transition now taking place. This study attempts to answer certain basic questions on a particular set of assumptions using particular analytical techniques. It needs to be examined and its assumptions, methods, and conclusions evaluated.

But this study, even assuming no further work within its bounds is required, deals with only some parts of the problem. It does not provide a detailed analysis of Japanese export possibilities, which is urgently needed. Major prerequisites for such an analysis are a review of prewar exports, containing detailed analyses of the markets for certain Japanese goods and of Japanese exports to certain markets, and studies of possible future Japanese exports, covering silk and silk products, cotton yarn and cloth, rayon and staple fiber cloth, and other products. Studies of particular markets must include China and practically every other area in the Far East, with particular reference to Japan's former colonies, Korea and Formosa. Each such study will necessarily deal principally with such economic problems as cost of production, exchange rates, the nature of demand for Japanese and competing goods, and a variety of related problems. But political and security considerations are of such importance that they should not be ignored. Such questions as the dangers of Japanese domination of certain markets, the dependence upon Japanese machinery requiring repair parts from Japan, the role of Japanese commercial representatives in foreign countries and the dangers of their being used for military purposes need consideration as well.

III. Collaboration between the Department and Outside Economists on Research Projects

The subjects and problems I have referred to as being of interest to the Department can only suggest the type of studies needed. No indication has been given of relative urgency of individual projects, nor has enough detail been given to ask any of you to go to work on a project tomorrow. What the Department is seeking is to make known its interest in economic research and to stimulate economists to get in touch with the Department in connection with projects affecting the Department's field of responsibility. In many cases productive collaboration between the economist and the Department may result.

A letter addressed to the Special Assistant to the Secretary of State

for Research and Intelligence will be referred to the appropriate research division. In order that this division may be of assistance quickly, it is desirable that the economist who is writing indicate his background and interests in such detail that a helpful reply can be made at once. The immediate interest of the Department is in obtaining the studies most urgently needed for the Department's work. The immediate interest of the economist will often be to obtain source material. In some cases, where a discussion on either of these interests appears called for, a personal visit to Washington may be desirable. The extent and effectiveness of collaboration will depend on circumstances that may vary greatly from case to case.

With respect to the needs of the Department for studies, the research division will know what the highest priority questions are and may be able to suggest a project of more importance than might have been selected independently. In any case, useful suggestions may be made as to timing, focus, coverage, source materials, or method of approach.

With respect to the economist's interest in procuring useful source materials, the research personnel of the Department will frequently be able to suggest useful materials. In the case of some of these materials, copies may be available for the retention of the economist or it may be possible to make copies available for use within the Department. In some cases research studies prepared in the Department or by a wartime agency may be of potential usefulness. Since security classifications on old studies are being removed wherever possible, a substantial number of them may be made available. New studies are issued without security classification where feasible and in some cases, such as that of the Japanese trade study already mentioned, are even being sent to interested persons for their information and comment. This sort of collaboration can be fostered best by direct contact between the persons concerned.

A project that requires study in a foreign country will be of particular interest to the Department. Certain facilities are extended by American embassies and consulates, available to all American citizens abroad. Through its missions abroad, the Department can be of some assistance, especially in giving letters of introduction to economists, libraries, research institutes, universities, and other persons and institutions that might possibly be of help.

It should be emphasized at this point, however, that I am referring to private and not government or government-sponsored research. In view of budgetary and other limitations upon participation by the Department in any project to the extent of sponsorship or financial assistance, I am not prepared to make any statement on this matter at this time.

To summarize, the research requirements of the Department of State are so broad and the need so acute that there is much important work waiting to be attacked. The Department wants to stimulate graduate students, faculty members, private economists, and research institutions to direct their economic research toward projects for which there is a specific need. To that end persons interested in research relating to foreign relations are urged to get in touch with the Department. Out of such contact, it is anticipated, fruitful collaboration may develop in many cases.

RESEARCH OPPORTUNITIES IN THE WAR PRODUCTION BOARD RECORDS

By DAVID NOVICK
Civilian Production Administration

I

Countless opportunities for economic research are available in the wartime industrial mobilization and reconversion experience of the government as reflected in the record of the War Production Board, its successor, the Civilian Production Administration, and its predecessors, the Office of Production Management, the Supply Priorities and Allocations Board, and the Advisory Commission to the Council of National Defense. Although prior to World War II this country had exercised central direction of and control over limited areas of the industrial economy—notably during World War I and in the thirties under the National Industrial Recovery Administration—never before has the record been so completely preserved and prepared for use.

The importance of recording and analyzing the story of our administrative response to the problems of World War II was recognized early. Neither the World War I nor the NIRA experience was collected and analyzed to make it useful for application in a future national emergency. Attempts of the defense agencies during 1940 and 1941 to find adequate analyses of the methods of meeting emergency problems of World War I and the thirties were largely futile because the available records of those periods were found to be both unmanageable and incomplete. At the beginning of World War II, officials with foresight realized that a relatively small investment in records preservation and analysis would provide a wealth of information that might be invaluable in the event of a future national emergency. These observers also foresaw that the war period would concentrate into a short span of years a lifetime of administrative experimentation and experience. They saw also the importance of recording these things for whatever purpose they might serve in improving the quality of peacetime administration.

Accordingly, in March, 1942, the Director of the Bureau of the Budget, at the suggestion of the President, appointed a Committee on the Records of War Administration to provide guidance and support in the assembly and analysis of material on the administration of the nation's war effort. The records and the analytical work referred to in this paper largely reflect the program fostered by the Committee and that part of the program carried out by the War Production Board and its successor, the Civilian Production Administration.¹

¹ A valuable contribution to an understanding of the development and administration

While it is unlikely that the current archival activity of the Civilian Production Administration will attain perfection in either completeness or manageability, there is every promise that the record of the WPB and its predecessors will be reasonably complete and, if appropriations are provided for the fiscal year which will end on June 30, 1948, it will be exceptionally usable for administrative and economic research.

The record which is now being systematically assembled and analyzed includes some material for 1939 and 1940, becomes more complete for 1941, and is about as comprehensive a record for the period from 1942 through 1946 as has ever been accumulated on any major public program. The complete record of industrial mobilization and reconversion activity for the war years is lodged in some 150,000 linear feet of filed material. Perhaps it is easier to visualize the magnitude of the record if you think of it in terms of about 50,000 square feet—an acre and a quarter—of floorspace lined with row after row of four-drawer file cabinets the drawers of which if placed end to end would extend thirty miles.

Through a systematic screening program this mass of material ultimately will be reduced to a carefully organized and indexed collection of information of permanent research value. The core of this collection will consist of a Policy Documentation File of about 1,500 linear feet, and will include all top policy materials of the war production agencies.² A second important collection of similar size, the Plant Data Integration File, will include selected categories of basic statistical information accumulated by these agencies during the war years. In addition, a number of smaller but important groups of records will be retained and organized for permanent reference. Completion of this program will eliminate the necessity for retaining permanently large bodies of materials, the greater part of which have no future value. The use of the records in their original form for historical and analytical research would have been virtually nullified because of the diverse character of the record groups and the lack of adequate finding mediums. Only by placing the valuable material under reference control can its maximum utilization for research be realized.

II

I think the mass of this record is impressive in its magnitude but I am even more impressed with the opportunities it affords for economic research. The potential research possibilities are so vast that I am

of the war program by the federal government has just been published under the auspices of the Committee. See, War Records Section, Bureau of the Budget, *The United States at War* (Washington: U. S. Government Printing Office, 1947).

²For a detailed description of the genesis and organization of the materials in this file, see Marie C. Stark, "Policy Documentation in the War Production Board," *American Archivist*, January, 1946.

limiting this analysis to those which would be of greatest interest to me personally.

First and foremost is the information available on problems relating to the "directed" as contrasted with the "free" economy. Although the WPB did not make contracts, it entered into most all of the transactions of the war years. Judgment of administrators was substituted for the mechanics of the market from primary production of raw materials through the manufacture of components and end products and their distribution to all kinds of users. The record at every echelon of the WPB activity provides the richest lode of research data yet available on the administrative problems of the managed economy.

Second, the record is extremely rich in primary materials relating to emergency organization, administration, operating methods and techniques, and the results of alternative controls. Although we earnestly hope that World War II was the last great armed conflict, history tells us that we must be prepared for possible future emergencies.

The WPB operated reasonably successfully with five vice-chairmen, a production executive committee, a requirements committee, some seven hundred industry and labor advisory committees, district and regional offices in the field, and a series of operational and staff bureaus. No one associated with this effort can say that the organization was perfect. No one may conclude that the organization will be adaptable in a future emergency.

Perhaps of more importance than organization are studies relating to the administrative experience in operating the economic system in an emergency. In every phase of WPB operations, success was largely dependent upon the nature of the administrative tools and procedures employed. These matters warrant the most careful study. Since World War II organization and methods were developed under a democratic, free-enterprise system, the fundamental principles learned from that experience undoubtedly will be usable in any future emergency.

Third, there is available an unprecedented mass of new statistical data bearing on specific economic problems. The character and extent of these data open up new opportunities for research on these problems. This is possible because the reporting system of the WPB penetrated almost every conceivable aspect of the industrial economy. For example, the 1940-41 search for data on the use of specific quantities of steel, copper, aluminum, and other primary materials for various purposes revealed that up to that time practically no information existed in this field. In allocating these materials to essential uses, the WPB had to establish in great detail the extent to which each of these metals was used in all of the end-items and components being manu-

factured. Although most of the allocation information covers wartime uses, in many cases data are also available about prewar and postwar usage. From data such as this, input-output relationships can be revealed for the first time for practically all primary materials as well as for a long list of components and end products.

On industrial capacities, as in the case of materials and components, a substantial body of new information becomes available. To meet wartime needs the WPB had to ferret out a wide variety of information on captive operations such as foundries, stamping shops, bearing, and electric motor manufacture. Since each facility was needed at its maximum productive rate, detailed information was also developed on equipment and capacity in terms of first-, second- and third-shift operations.

Where capacity was expanded, detailed data are now available on new construction, remodeling, and additions to and new installations of equipment. This information is classifiable, not only in terms of wartime, but also in terms of prewar products. With this type of data, it is possible to analyze the relative effects of government and private expenditures on new building versus additions and remodeling, the financial impact of construction expenditures on companies, and the importance to the peacetime economy of construction to produce purely military weapons compared with construction for production of products having peacetime uses.

Most all of the facility and production information collected by the WPB is classifiable by geographic area. This makes possible new regional and local studies. For example, this type of data can be used to reveal the impact of the war on the industrial structure of a locality and as a basis for appraising the new economic potential of an industrial center.

Local and regional studies were used extensively by the WPB for a variety of purposes. At first it was in connection with the strategic location of industrial plants, next to minimize unemployment in certain areas, and finally to maximize production by keeping new contracts and new activities out of overcrowded areas. As a result much specialized data are available relating to local and regional economic conditions. For example, although the WPB did little or nothing with respect to cross-hauling and related problems, the data collected may be used for detailed studies of transportation.

For a long list of products the WPB often required manufacturers to furnish anticipated shipping schedules, lists of individual customers, the product into which the customer fabricated materials, and the ultimate use of the customer's final product. Conversely, the customer in many cases had to file information about his vendors. For a few items,

such data permit studies of the detailed economic interrelationship of various industries. For a longer list of items, similar studies can be made in broader terms.

The research possibilities here outlined are, of course, suggestive rather than exhaustive. Let me now present in some detail the character of the material being collected, the manner in which it is being organized for use, and outline the program now underway for its analysis.

III

Perhaps the most important collection of materials relating to our wartime industrial mobilization experience is contained in the Policy Documentation File referred to above. This file, when completed, will include all basic documents that relate to the administration of the economy for war production. For reference control, this file is well indexed, catalogued, and arranged under ten basic subject categories as follows: organization, control of materials, war industries (aircraft, shipbuilding, radio and radar, ordnance), construction and equipment, commodities and products, utilities and services, relations with other agencies (including states and territories, and foreign countries), national war economy, and demobilization and reconstruction.

Within these broad groups, materials are further classified into sub-categories tailored to fit the subject matter. For example, under organization, secondary categories include: establishment, personnel, budget, administration, meetings, functions, organization, reports and issuances, and termination. Another system of secondary categories applies to more specific subjects such as: raw materials, requirements, priorities and allocations, production, orders, conservation, and rationing. By the use of this classification scheme, which is unique in archival practice, we have been able to make available quickly and efficiently all of the basic policy materials in the file on any particular subject or on any broad phase of our industrial mobilization effort.

The Policy Documentation File thus not only provides a wealth of research materials, but also the finding mediums and tools necessary to implement its utilization for research purposes. To encourage further utilization, a program for downgrading classified material (i.e., secret, confidential, etc.) is making the file available to scholars and others to the maximum extent consistent with the regulations governing military security and confidential company data.

Research opportunities in the Policy Documentation File are reflected in the broad range of subjects treated in a series of historical reports on war and reconversion administration that are now being prepared from the materials in this file. These reports attempt to pre-

sent objectively a comprehensive analysis of all important aspects of our wartime industrial mobilization and demobilization experience. As such, of course, these studies will be available for use by research scholars of economics, history, political science, and public administration. In addition, and of great importance, they will preserve for administrators the principal lessons of World War II operations.

To achieve these objectives, this program includes the preparation and publication of three major series of fully documented analytical reports. Perhaps of primary interest to this group is the series of "Special Studies" which cover in detailed monographic form all major problems and areas over which the war production agencies had jurisdiction during the war years. Twenty of these studies, completed and published, are as follows: *Policies Governing Private Financing of Emergency Facilities*, May, 1940, to June, 1942; *The Facilities and Construction Program of the War Production Board and Predecessor Agencies*, May, 1940, to May, 1945; *Aluminum Policies of the War Production Board and Predecessor Agencies*, May, 1940, to November, 1945; *Evolution of Premium Price Policy for Copper, Lead and Zinc*, January, 1940, to November, 1943; *The Closing of the Gold Mines*, August, 1941, to March, 1944; *Concentration of Civilian Production by the War Production Board*, September, 1941, to April, 1943; *The Role of the Office of Civilian Requirements in the Office of Production Management and the War Production Board*, January, 1941, to November, 1945; *Labor Policies in the Defense and Early War Production Periods*, May, 1940, to April, 1942; *Aircraft Production Policies under the National Defense Advisory Commission and the Office of Production Management*, May, 1940, to December, 1941; *Shipbuilding Activities of the National Defense Advisory Commission and the Office of Production Management*, July, 1940, to December, 1941; *Landing Craft and the War Production Board*, April, 1942, to May, 1944; *Truck Production and Distribution Policies of the War Production Board and Predecessor Agencies*, July, 1940, to December, 1944; *Alcohol Policies of the War Production Board and Predecessor Agencies*, May, 1940, to January, 1945; *Farm Machinery and Equipment Policies of the War Production Board and Predecessor Agencies*, May, 1940, to September, 1944; *Mercury Policies of the War Production Board and Predecessor Agencies*, May, 1940, to March, 1944; *Lead and Zinc Policies of the War Production Board and Predecessor Agencies*, May, 1940, to March, 1944; *Pulp and Paper Policies of the War Production Board and Predecessor Agencies*, May, 1940, to January, 1944; *Hide and Leather Policies of the War Production Board and Predecessor Agencies*, May, 1940, to December, 1943; *Resumption of*

Production of Domestic Flat Irons, April, 1943, to August, 1944; and Development of the Reconversion Policies of the War Production Board, April, 1943, to January, 1945.

Out of a total of sixty reports projected for the "Special Study" series, the following are currently in progress: *Labor Policies, 1942-45; Industry and Labor Advisory Committees, 1940-41; Field Organization and Administration of the War Production Board and Predecessor Agencies, 1940-45; Conversion of Durable Goods Industries to War Production during the War Years; Copper Policies, 1942-45; Steel Policies, 1940-45; Textile and Clothing Policies, 1940-45; Priorities and Allocation Systems; Controlled Materials Plan; Programming of Defense and War Production; Procurement Policies, Machine Tools; Rubber Policies; and Import Policies.*

The "Special Studies" are being prepared in multilithed form. Copies have been distributed to depository, university, and research libraries throughout the United States and abroad, where they will be available to scholars in all fields of research.

A second major project is a three-volume "General History" series that will cover the broad phases of our wartime and civilian production experience from 1940 through 1947. Under the general title "Industrial Mobilization for War, 1940-45," Volume I, *Program and Administration*, Volume II, *Materials and Products*, and Volume III, *Reconversion*, will deal with the problems and policies encountered in the transition from war to civilian production during the reconversion period. It is thought that these volumes will constitute a unique contribution to the literature of wartime administration. They will be fully documented, will contain critical analyses of our war production effort, and will evaluate our failures as well as our accomplishments. These volumes will be published by the Government Printing Office for general distribution. Volume I should be off the press sometime this spring and work on Volumes II and III is being pushed forward rapidly.

The third series, "Documentary Publications," make available in printed form the minutes of the "top boards" and committees of the war production agencies. Five volumes in this series have already been printed by the Government Printing Office. These include: *Minutes of the Planning Committee of the War Production Board, Minutes of the War Production Board, Minutes of the Advisory Commission to the Council of National Defense, Minutes of the Council of the Office of Production Management*, and the *Minutes of the Supply Priorities and Allocations Board*. Additional publications in this series may ultimately include the minutes of the WPB Requirements Committee and those of the Order Clearance Committee.

IV

A second significant accumulation of information is contained in the Plant Data Integration File referred to above. One part of this collection attempts to preserve all useful wartime reports and applications filed with the WPB by the largest industrial plants in the United States. The foundation for this part of the collection was laid by a selection from the more than 4,500 questionnaires used by the WPB. The 1,250 reporting forms which were presumed to have permanent usefulness either for research or as a source of wartime production facts were selected. These questionnaires are being assembled only for the 5,000 largest plants in the United States. These include the 500 largest basic material producing plants, the 3,000 largest metal-fabricating plants, and the 1,500 largest nonmetal working plants. By this process of selection, it is possible to systematize information of maximum utility.

At the present time, collection of this basic information is approximately 85 per cent complete. The average plant folder contains about 25 different questionnaires, with a total of between 200 and 250 individual schedules. To date, the total collection for all plants is well beyond 1,000 different questionnaires, and includes approximately 1,250,000 individual schedules.

Efforts are being made to make these data more useful for research. For example, there is being prepared for each plant included in the file a Plant Analysis Card which sets forth the name and location of the plant; parent company affiliations; brief history; the volume of production by major products in the years 1939, 1943, and 1946; employment; manufacturing process performed in the years 1939, 1943, and 1946; and principal materials or components utilized in the years 1939, 1943, and 1946. In addition, a listing is being developed from information available in the basic plant files and other sources, showing the name and location of all plants, regardless of size, managed by the largest central office establishments in the United States. These and other finding media should enable any future analyst to thread his way through the mass of data assembled in the Plant Data Integration Files. In addition, they stand as valuable sources of factual information.

A second part of the plant data integration collection includes all useful and important data assembled by the WPB of both a qualitative and quantitative character relating, for the most part, to data in the plant folders described above. In this portion of the file are such data as: bills of materials; analyses of production difficulties, bottlenecks, scheduling programs, etc.; statements of material requirements for

individual products, groups of plants, and industries; labor productivity studies; comprehensive compilations concerning such matters as facilities, plant capacity, plant utilization, shipments, production, etc.; analyses of WPB questionnaire methods; special listings of various plants and companies; data concerning war contracts; descriptions of industry record-keeping systems; company pamphlets, brochures, and other publications; reports on standardization and simplification of products; conservation of materials; and concentration of production. These materials are filed on the basis of a subject classification scheme.

This file of material now contains approximately 50,000 documents ranging from single-page compilations to tabulations with thousands of pages; from data about obscure products to facts covering thousands of products; from studies about one plant to comprehensive reports covering all American industry; and from short studies to the results of broad research programs.

The PDI collection program thus far successfully retrieved the great bulk of useful WPB data and, by systematic selection and cross-indexing of filed materials, has made them readily available for use by both government and industry. These data constitute an extraordinarily valuable source of facts pertaining to wartime production. In addition, and of equal importance, the data present outstanding opportunities for study of emergency industrial reporting problems and methods.

Some study of these problems and methods is now in progress. This, however, is largely devoted to charting the paths for long-range research programs. The following studies illustrate the nature of these long-range programs: (1) study of the extent to which plant reports may be used as the backbone of a wartime industrial statistical reporting structure; (2) studies of product and material definitions for use in current reporting programs; (3) development of a manual, for distribution to industry, specifying the nature of the statistical requirements of a wartime government; (4) studies of record-keeping practices of industry for adaptation to both current reporting and future emergency needs; (5) development and institution of test runs in peacetime of keystone wartime collection devices; (6) analysis of the methods used by the WPB to obtain data pertaining to scheduling of critical components; (7) comparison of efficiency of metal distribution under horizontal and vertical allocation methods; (8) a program for integrating various reporting methods—for example, plant and product reports; (9) analysis of concentration of material use in industry and its application to reporting and control methods; (10) analysis of concentration of output of products and its application to reporting and control methods; (11) the role of material control accounting in WPB data collection and program control; (12) analysis

of the methods adopted to obtain ultimate or end-use information and the problems in obtaining this kind of data.

V

In addition to the major collection and analytical programs discussed above, there are two other programs which will be of interest to this group. One of these is the publication of data collected by the WPB in the "Facts for Industry" series, inaugurated in 1943. During the war, industry frequently requested that information submitted to the WPB be made available for business use. At first, government regulations made it impossible to release any economic data for this purpose. Later, however, a careful screening process was established for releasing some of the data through the "Facts for Industry" series. Since the end of hostilities, releases in this series have been sharply expanded to include much of the more important data collected by WPB.

The other program, a *Catalogue of WPB Reporting and Application Forms*, is now ready for publication. This catalogue will include all of the data collection and application forms used by the WPB and its predecessors which have permanent value. Each of the forms will be reproduced, and a brief analysis given of the commodity or commodities covered by the report, the time period to which the report applied, and the number of periods for which it continued in existence. Reference will also be made to the nature of the respondents and the coverage obtained by the report. Most of the forms in these reporting series have been or are being transferred to continuing government agencies. The catalogue will identify the federal agency to which the series has been transferred and will also make reference to the tabulations of the data which have already been published. In some cases, an evaluation will be made of the quality of the data obtained from the report and the success of the form in obtaining the types of information for which it was designed. This catalogue should prove to be a handy reference for economic research.

VI

The records of the WPB, its predecessor, and successor agencies, embody the richest source of information this nation has ever gathered on problems relating to industrial mobilization. Left untouched, this mass of data today is quite unmanageable for research and would become even more so with the passage of time. Through the programs discussed in this paper, however, the cream of usable information is being segregated into systematically indexed files. These can furnish the material upon which there can be developed satisfactory industrial mobilization plans adaptable to any emergency.

DISCUSSION

Philip M. Hamer, Director of the World War II Records Project, described this project, stated that this undertaking was organized in the latter part of 1946 following President Truman's approval of the plan. The purposes of this project are:

To extend, supplement, integrate, and make available the information about the records of the Government's wartime experience now being assembled there are needed:

- a. *A Handbook of Federal World War II Agencies and Their Records.*
- b. *Inventories*, by series, of the significant records of war agencies and of war-related activities of other agencies.
- c. *Lists* of published and unpublished histories, monographs, reports, and other documents of special individual interest.
- d. An overall *Guide* on a subject basis to the documentation of the Government's war experiences.

Substantial progress has been made in preparing copy for the *Handbook of World War II Agencies and Their Records*.¹

¹ Multilith copies of the *World War II Records Project* may be obtained from the National Archives.

AMERICAN ECONOMIC ASSOCIATION
PROCEEDINGS OF THE FIFTY-NINTH
ANNUAL MEETING

Atlantic City, New Jersey
January 23-26, 1947

PROCEEDINGS OF THE AMERICAN ECONOMIC ASSOCIATION
ANNUAL BUSINESS MEETING, JANUARY 25, 1947, HADDON
HALL, ATLANTIC CITY, NEW JERSEY

The business session of the 59th Annual Meeting of the American Economic Association was held at Haddon Hall, Atlantic City, January 25, 1947, at 5:00 P.M., President Goldenweiser presiding.

In his introductory remarks, President Goldenweiser commented on the character of our organization, drawing attention to the function of the Executive Committee in acting on behalf of the Association. The annual business meeting is the only occasion at which the members of the Association have an opportunity to discuss the actions of the Executive Committee as recorded in the minutes. The only real recourse which members have in influencing policies directly is to discuss them at this time or to communicate with officers or members of the Executive Committee. Some indirect control is of course exercised in nominating and electing officers. The ratification of the acts of officers and of the Executive Committee at the annual meeting is perforce a formality.

The Managing Editor of the *American Economic Review*, P. T. Homan, spoke informally about the problems and policies of the Editorial Office and the Editorial Board. He stated that the volume of manuscripts being received during this period is increasing, called attention to the fact that the Editorial Office has been moved back to permanent headquarters at Cornell University, that a new assistant to the Managing Editor has been appointed, and that he has sought an increased budget to cover increased costs and growing circulation. The Managing Editor's report and budget for 1947 are printed in the present volume, pages 745.

The operations and activities of the Association during the past year were summarized by the Secretary-Treasurer. A fuller account may be found in the following reports printed in these *Proceedings*:

Report of the Secretary, page 706.

Report of the Treasurer, page 723.

Report of the Finance Committee, page 726.

Report of the Auditor, page 740.

Other reports referred to and which are printed in the *Proceedings* are as follows:

Report of the General Committee on Republications (H. S. Ellis, Chairman), page 749.

Report of the Committee on Research (S. E. Leland, Chairman), page 750.
(See also Round Table on Economic Research, page 649.)

Report of the Committee on Undergraduate Teaching of Economics and the Training of Economists (Horace Taylor, Chairman), page 762.

Report of the Subcommittee on Consensus Reports (C. D. Edwards, Chairman), page 765.

American Council of Learned Societies (F. H. Knight), page 761.

Social Science Research Council (J. J. Spengler), page 766.

National Bureau of Economic Research (D. H. Wallace), page 767.

The results of the mail ballot for the election of new officers were reported by the Secretary and President-elect P. H. Douglas was introduced by the retiring President.

The certification of election by the Secretary follows:

In accordance with the bylaws on election procedure, I hereby certify the results of the recent balloting, and present the reports of the Nominating Committee and the Committee on Elections.

The Nominating Committee, consisting of Charles O. Hardy, Federal Reserve Bank of Kansas City, Chairman, J. Frederic Dewhurst, Twentieth Century Fund, Joseph S. Davis, Stanford University, David M. Wright, University of Virginia, Oliver C. Lockhart, University of Buffalo, and Mildred B. Northrop, Bryn Mawr College, presented to the Secretary the list of nominees for the respective offices:

For President

Paul H. Douglas

For Vice-Presidents

Percy W. Bidwell

John Ise

William A. Macintosh

Mabel Newcomer

For Executive Committee

Ben W. Lewis

W. Blair Stewart

Arthur R. Upgren

John V. Van Sickle

The Committee on Elections (John H. Wills, Northern Trust Company of Chicago, Chairman, Walter E. Hoadley, Jr., Federal Reserve Bank of Chicago, and James Washington Bell) prepared biographical sketches of the candidates, and ballots were distributed the latter part of November. The canvass of ballots was made on January 3, 1947, and the results were filed with the Secretary.

From the report of the Committee on Elections, I have the following information:

Number of envelopes without names for identification	4
Number received too late	12
Number of defective ballots	3
Number of legal ballots	1,900
Number of returns from the mail ballot	1,919

On the basis of the canvass of the votes cast, I certify that the following persons have been duly elected to the respective offices:

President (for a term of one year)

Paul H. Douglas

Vice-Presidents (for a term of one year)

John Ise

Mabel Newcomer

Members of the Executive Committee (for a term of three years)

Ben W. Lewis

Arthur R. Upgren

James Washington Bell, *Secretary*

After the reading of the list of persons deceased during the past year, the members rose in silent tribute. The list contained the names of two past presidents, Edwin F. Gay and John H. Gray.

The report of the Committee on Resolutions was submitted by D. L. Kemmerer and read as follows:

WHEREAS, The members of the American Economic Association, meeting in the 59th annual session, January 23-26, 1947, in Atlantic City, New Jersey, desire to record their gratitude; therefore, be it

Resolved, That the Secretary be instructed to extend the sincere thanks of the members of the Association to President E. A. Goldenweiser, those who assisted him, and those who contributed to a program distinguished by its variety of challenging topics and many new participants; and be it further

Resolved, That we extend thanks to the officers and members of the several associa-

tions concurrently meeting for the opportunity to share in their interesting programs; and be it further

Resolved, That we extend thanks to Mr. J. Weldon Hoot, of the University of Pennsylvania, for his help in making the local arrangements for the meetings; and be it further

Resolved, That we extend to the management and employees of Chalfonte-Haddon Hall, especially Mr. E. D. Parrish and Mr. Ellsworth Sooy, and to the Atlantic City Convention and Publicity Bureau our appreciation of their services during the meetings.

Donald L. Kemmerer, *Chairman*

Herluf V. Olsen

John B. Woosley

Howard H. Preston

Adjourned.

REPORT OF THE SECRETARY FOR THE YEAR 1946

The following report includes minutes of the Executive Committee and thereafter some brief comments on the activities and operations of the Association during the past year.

1. Minutes of the second meeting of the 1946 Executive Committee:

The second meeting of the 1946 Executive Committee was held at Princeton Inn, Princeton, New Jersey, April 11-13, 1946. The meeting was called at noon and was continued through Friday and Saturday, adjourning at noon on the latter day. The following were present: President Goldenweiser, presiding, and Mrs. Burns and Messrs. Bell, Davis, Ellis, Fetter, Goodrich, Harris, Homan, Kuznets, Sharfman, Wilcox, and Wolfe, and, by invitation, Buchanan, Knight, Leland, Spengler, and Wallace. Absent, T. W. Shultz.

1. *Minutes.* The minutes of the 58th Annual Business Meeting, held at Cleveland, January 26, 1946, and of the second and third meetings of the 1945 Executive Committee and the first meeting of the 1946 Committee were APPROVED, subject to editorial changes, as set in galley proof.

2. *President's Remarks.* In his introductory remarks President Goldenweiser outlined the program and called attention to certain changes in the order of our procedure to accommodate the convenience of some of our members and to permit them to attend a tea given at the Institute for Advanced Study. The minutes do not, therefore, follow a strictly chronological order.

3. *Secretary's Report.* Professor Bell presented a brief account of the registration, attendance, local arrangements, and financial results of the Cleveland meeting. The number of registration cards filed at the Hotels Cleveland and Statler was 932 of which 559 were members of the A.E.A. Estimated attendance exceeded this number since the usual practice of withholding copies of the program until members had registered could not be followed on account of the delay in the arrival of the printed programs. Registration proceeded until the programs reproduced by photographic process (which was authorized on Thursday P.M.) were available on Friday A.M. These were in the process of being assembled and were being distributed when the printed copies shipped by Express made their appearance. Except for program expenses the costs of the convention were met by income from the sale of luncheon tickets. No registration fees were charged. The cost of printing programs (including 4,500 mailed in December and 2,600 distributed in Cleveland) was \$255.35, and the cost of reproducing the 2,000 in Cleveland was \$62.73.

The meetings at Cleveland were universally acclaimed successful in every respect. For the smooth operation of the many details of management Messrs. D. A. Hill and R. L. Davison deserve credit, and for the character and quality of the program our thanks are due to the President and those who worked with him.

The Secretary indicated that the problems of the secretarial office are growing more and more difficult with our increased membership, the large number of changes of address, the renewal of our contacts with foreign members and subscribers and the catching up with back numbers, the heavy load of correspondence resulting from our more and more varied activities. He referred to the Secretary's annual report in the *Proceedings* for a fuller account of the current operations of the Association.

4. *Vote of Appreciation.* It was VOTED to spread upon the minutes the following expression of appreciation and gratitude to President I. L. Sharfman for his vigorous and effective leadership during his term in office: The Committee desires to place on record its warm appreciation of Professor Sharfman's contribution to the Association during the past year. The enthusiasm and energy with which he has carried out the heavy duties of the presidency, the ready and helpful support which he has at all times given to the work of the numerous committees and his own high conception of the Association as an organization with responsibilities both to the profession as a whole and to the wider society of which economists are a part have greatly enhanced the vitality of the Association and its meetings.

Appreciation and approval of the Secretary's work was also noted.

5. *Publication Reports.*

a) *American Economic Review* (P. T. Homan). The report of the Managing Editor, as printed in galley proof, was reviewed and brought up to date. Professor Homan explained that the delay in the appearance of the March number of the *Review* would not be repeated in the case of the June number; that so far as the Editorial Office was

concerned, this number could be out by the first of June. He reported that manuscripts were flowing in satisfactorily and that schedules would be even better maintained after returning the office to Ithaca, which will probably take place in the summer or early fall.

A meeting of the Editorial Board was held at Cleveland.

b) *Papers and Proceedings of 1945; Handbook, 1946, and Directory, 1948 (J. W. Bell)*. The contents and make-up of the *Papers and Proceedings* and the schedule of dates when manuscript and galley proof were received and sent to the printer were briefly described. The reasons for separate publication and mailing were explained. Professor Bell suggested this as a permanent arrangement. Postal regulations permit any number of issues per year (now specified as five) with the *Papers and Proceedings* still a part of the *Review*. Greater flexibility and more realistic recognition of existing conditions would suggest a separate editorial office for the publication of the *Papers and Proceedings* and the *Handbook and Directory*. Should the Association embark on the publication of other series, such as the *Review of Economics* or a pamphlet series of *Economic Policy Reports*, this same problem of separate publication and editorial office would be encountered. Some inconsistencies seem to have grown up in our practice, since Article IV, Section 5, of our Charter and Bylaws states that the Editorial Board and the Managing Editor "shall have charge of the publications of the Association" and Article IV, Section 2, indicates that the Secretary shall perform such "duties as the Executive Committee may assign to him." However, it was not deemed necessary to call for an amendment of the Charter and Bylaws at this time to regularize the change.

It was VOTED to empower the Secretary with the necessary authority to establish a separate publication office in order to comply with postal requirements and facilitate the separate issuance of the *Papers and Proceedings*.

The Secretary reported permission granted by President Sharfman and the Secretary to the American Finance Association to arrange for reprints of the three joint sessions of our Cleveland meeting to be sent under separate cover to their members.

Professor Bell called attention to the increasing number of demands being made for the use of our mailing list cards because of the outdated 1942 *Directory*. Changes of address since V-E and V-J Days have been exceptionally numerous and even with both temporary and permanent addresses available in the 1942 *Directory* and annual supplements several hundred letters would be returned if this list were used. The temptation is great, therefore, to permit the use of our stencils for all legitimate purposes. Because of the wear and tear to which these stencils have been subjected we have found it necessary to charge a \$10 fee, in addition to operating costs, for replacement of wornout cards.

It was VOTED to authorize the publication of a simple *Handbook* in 1946, containing names and addresses of members and subscribers, the more elaborate *Directory* in "who's who" form being deferred until a revision of our classification of fields of economics can be effected, say in 1948.

In recommending the postponement of the publication of the *Directory* until 1948, Professor Bell suggested that a committee be constituted to review the several special-purpose classifications of the fields of economics and, if possible, to prepare a revised classification of subject matter which will be useful for general purposes, both with respect to personnel and the literature of economics.

It was VOTED that President Goldenweiser appoint such a committee.

c) *Committee on Republications (H. S. Ellis)*. Professor Ellis reported that Vol. III of the Blakiston series, on *Distribution of Income*, is about ready to come off the press despite the paper shortage, and that Vol. IV, on *International Trade*, is under way. He solicited suggestions for the subject matter to be considered for Vol. V. A previous survey of the fields for which the demand is considered most urgent listed public finance, equilibrium theory, theory of production, and theory of relative prices as possibilities. No action was called for.

6. *Reports of the Treasurer, Finance Committee, Auditor and on the Long-run Financial Policy of the Association (J. W. Bell)*. These reports were approved as printed in galley proof.

Brief comments were made with respect to the financial condition of the Association. No discussion took place.

7. *Committee on the Publication of a Review of Economics (J. J. Spengler)*. Professor Spengler reported on the progress made in interesting foundations in our projected volumes of the *Review of Economics*. They are, however, not interested in making commitments beyond the first two volumes. Several publication houses have made some inquiry concerning the publication of the *Review*. Professor Spengler's com-

mittee recommended that we get a strong editor and an associate editor and five advisory editors. All efforts to persuade Professor Spengler to assume the editorship having failed, other suggestions were considered, and it was finally VOTED to authorize President Goldenweiser to proceed as promptly as possible to make the appointment of an editor. Professor A. B. Wolfe was forthwith offered the post and subsequently accepted. The President was empowered to work out financial arrangements in making appointments, and it was specified that these details need not necessarily lie within the limits prescribed in the committee's report. A tentative time schedule was discussed. The schedule contemplated publication of the first two volumes in the spring of 1948. To meet this schedule, assignments would have to be made by June 30, 1946, manuscripts received in the fall, with a deadline for final copy indicated for January, 1947, and, allowing six to eight months for the printer, this schedule was considered reasonable. It was suggested by J. J. Spengler and E. M. Burns that members of the Executive Committee send to Professor Wolfe recommendations of three lists of names and addresses: (1) for an associate editor, a capable and energetic young economist who could undertake and follow through the administrative detail involved in carrying out the schedule referred to above; (2) for board of advisory editors, five to nine economists with a good reputation for intellectual distinction and ability and willingness to work (younger men with weight and energy); and (3) for contributors and consultants in the several fields of economics suggested by the classification printed in the committee's report. The third group of names might well be divided into two groups; viz., contributors and consultants.

8. *Teaching of Economics and the Training of Economists (A. B. Wolfe for Horace Taylor)*. A letter from Horace Taylor was presented by A. B. Wolfe, submitting an estimated budget for next year involving the unexpended balance of \$600 appropriated, plus \$1,000 for additional expenditures. This request was APPROVED.

9. *Committee on Economic Opinion and Public Policy (J. S. Davis for C. D. Edwards)*. Professor Davis read the first set of recommendations of the committee; that is, the part pertaining to the board of editors on economic policy reports. After an extended discussion of Part I, it became obvious that there was no unanimity of opinion and a motion to approve the recommendations on general principles gave way to a substitute motion, referring the problem back to the present subcommittee with instructions that it study and analyze past experiments, consider additional experiments of the same sort in connection with this year's program, if so determined by the President, and report back a year hence. The substitute motion was VOTED.

Part II of the consensus report relating to public polls was then debated, and except for item 4 of the recommendations of the committee, these were considered proper conditions for the use of our mailing list and it was VOTED to approve items 1, 2, 3, 5, and 6, these to be considered as instructions to the Secretary as guides or directives to his conduct in this matter.

10. *Research (S. E. Leland)*. A preliminary analysis of the questionnaire sent to members of the Association by the committee was presented by Professor Leland. Professor Leland cited examples and described the general structure of the answers to the thirteen questions of the three hundred responses received, and outlined the methods of further analysis which will be made if a classification of the returns proves feasible.

The funds authorized by mail ballot for the committee's activities in connection with the questionnaire and with the work on the preservation of war records have not been exhausted and no further request for funds was made.

With the retirement of E. G. Nourse as the Association's representative on the Social Science Research Council the question was raised as to the composition of the Research Committee. Professor Leland stated that it was the intention of the committee to recommend Mr. Nourse for membership, since the provision constituting the committee permits its enlargement.

The report was RECEIVED and it was requested that the committee continue with the work at hand.

11. *Committee on Book Reviews (H. S. Ellis)*. Professor Ellis, reporting for the Committee on Book Reviews, called attention to the August, 1945, number of the American Statistical Association *Bulletin* which contained a statement by O. K. Buros concerning book reviewing policies. These are of the same general character as those recommended by our committee. Professor Homan agreed that such a statement is desirable and should be used but asked that the Editor be authorized to amend somewhat the statement of the Committee on Book Reviews. It was agreed that modification of the statement would be appropriate if acceptable to the Chairman of the Committee on Book Reviews. No further complaints on book reviews were reported. Professor Homan suggested that foreign correspondents of our Association might

serve a useful purpose in apprising the Editor of the existence of important literature and notes of interest in foreign lands. He suggested that they might be asked to produce review articles of groups of books according to fields and special articles on the degree to which economic rehabilitation has taken place in Europe. It was agreed that in the printed *Proceedings* a headnote under the title of this report should re-enforce this request, and that the Executive Committee should defer action upon it until time had been allowed for receipt of communications on the subject.

12. *Honors and Awards* (S. H. Slichter, Chairman). The statement was made that at the business meeting the reaction of members to the report was called for. None have been received. No further consideration was given this report at this meeting.

13. *Honorary Members—Foreign* (E. G. Nourse, Chairman). The reports of the Nourse and the Willits committees were received, and it was VOTED that mail ballots be prepared, together with brief biographical sketches of the names on the panel submitted by the Willits committee from which three candidates are to be selected this year (i.e., names of those not already elected), and that a year hence the Executive Committee again select candidates from this present panel. Thereafter a new committee will select new names.

14. *Electoral College—Nominating Committee* (C. O. Hardy, Chairman). The joint session of the Executive Committee and the Nominating Committee convened as an Electoral College on Friday evening to consider the panel of names submitted by the Nominating Committee for the office of president for the year 1947 and also our representatives to A.C.L.S. and S.S.R.C. In addition to the members of the Executive Committee, the following members of the Nominating Committee were present: C. O. Hardy, Chairman, J. S. Davis, J. F. Dewhurst, David McCord Wright, O. C. Lockhart, and Mildred B. Northrop.

In accordance with the new procedure, the Electoral College chose Frank H. Knight representative to the American Council of Learned Societies for a four-year term and Harold A. Annis representative to the Social Science Research Council for a three-year term.

15. *Reports of Council Representatives*. Reports of representatives to the councils were presented as follows: F. H. Knight, for the A.C.L.S., S. E. Leland, for the S.S.R.C., and for the National Bureau of Economic Research, D. H. Wallace.

16. *Annual Meeting*. The discussion of the time and place of our next annual meeting boiled down to a choice between New York City (December 27, 28, 29) and Chicago (December 26, 27, 28) during the Christmas holidays and Atlantic City in January. The very limited accommodations available during Christmas recess prompted the Committee to vote in favor of Atlantic City, with the preferable dates January 24-26, with January 10-12 as alternate.

17. President Goldenweiser asked if the Executive Committee could use its influence by supporting the position taken by the F. C. Mills and W. C. Mitchell reports vindicating the conduct of A. Ford Hinrichs, of the Bureau of Labor Statistics. Although personal sentiment favored such conduct, it was generally agreed that we as an Association could do nothing about the matter.

18. Professor Homan reported a communication from Mr. Snapper, of the American Council on Public Affairs, enlisting the co-operation of the Association in the editing of a dictionary of modern economics. No action was taken.

19. The balance of the session was devoted to the discussion of plans for the program and meeting for 1946. President Goldenweiser submitted an outline of the topics which he thought should be considered at our next annual meeting and solicited suggestions from members of the committee with regard to additional or alternate topics as well as names of key members who might appropriately be asked to participate.

20. As a final item of new business, it was VOTED that the President appoint a committee to draft a suitable resolution, expressing our appreciation on behalf of American economists of the work done by the Economic and Financial Committees and other agencies of the League of Nations. A copy of this statement is to be cabled to Geneva on the occasion of the last meeting of the Assembly and the statement is to be read and published at the next business meeting of the Association as an action of the Executive Committee. The statement follows:

*Mr. Carl Hambro, President,
Assembly of the League of Nations,
Geneva, Switzerland.*

The American Economic Association, through its Executive Committee, wishes to express to the League of Nations its great appreciation of the important work which has been done by its Economic Staff under the leadership first of Sir Arthur Salter and later

of Mr. Alexander Loveday. Mutual understanding by the nations of the world of each other's economic problems is a necessary condition for effective international co-operation and consequently for peace. The splendid work of the League in developing and co-ordinating comparable economic data for many countries and in analyzing economic influences which start in individual countries but spread throughout the world, as well as in developing programs for combating destructive forces, will forever stand as a mighty contribution to the advancement of well-being throughout the world.

E. A. Goldenweiser, *President*
American Economic Association

Adjourned.

2. Minutes of the third meeting of the 1946 and of the first meeting of the 1947 Executive Committee:

The third meeting of the 1946 Executive Committee was held at Haddon Hall at Atlantic City, New Jersey, January 23, 1947. The meeting was called at 11:00 A.M., but on account of late trains from the north and the west, the regular order of business was postponed until 2:00 P.M. Professor Howard S. Ellis served as interim secretary.

It was VOTED that the matter of the Bureau of Agricultural Economics brought up by Paul S. Taylor be referred to J. S. Davis to inquire into and report upon at the spring meeting. If Professor Davis finds it impossible to carry this through, he will discuss with the incoming president a suitable person to take over this role.

It was VOTED that the Association send a congratulatory message to Dr. Irving Fisher on the occasion of his eightieth birthday, and that the Association appoint an official representative to be present at the dinner in his honor being organized by Dr. W. I. King to be held in New York in February. It was suggested that the Association not appear as an official sponsor inasmuch as a number of members and past presidents reaching eighty have not been so distinguished by the Association.

The Committee on Republications (Blakiston project) was empowered to investigate and draw up a future contract and to invite advisers or supplementary members for purposes of negotiating the contract. The committee was also empowered to alter its own membership.

The Executive Committee reconvened at 2:00 P.M. The following were present: President Goldenweiser presiding, Bell, Burns, Davis, Douglas, Ellis, Goodrich, Harris, Homan, Kuznets, Lewis, Schultz, Sharfman, Upgren, and Wolfe, and, by invitation, Edwards, Spengler, Wallace, Amos E. Taylor, and Horace Taylor.

1. *Minutes.* The minutes of the April 11-13, 1946, meeting held at Princeton, New Jersey, as mimeographed and distributed were reviewed and approved.

2. *President's Remarks.* Dr. Goldenweiser expressed his concern about our present practice in electing the president of the Association at the meeting of the electoral college in the spring and not announcing the results until after the certification of the election of all officers at the annual business meeting. He also expressed his concern, as did others, about the nominating procedure and the almost complete lack of participation on the part of members of the Association in the nomination of candidates for office.

Our bylaws provide that the incoming president appoint a nominating committee and that "the names of the Committee shall be published in the March or June issue of the *American Economic Review* with an invitation to the general membership that suggestions of nominees for the various offices be sent to the chairman of the Committee." Very few such suggestions are commonly received and the committee makes up its panel before September 1 of each year without any significant help from the outside. It was therefore VOTED that a special mailing be authorized, notifying the members of the names of the nominating committee, describing briefly the nomination and election procedure, and asking members to suggest changes which will be considered in the spring meeting of the Executive Committee. In this communication the list of offices to be filled should be indicated to enable members to make suggestions of candidates for all of the offices.

It was VOTED to authorize the Committee on Republications to send a circular, soliciting suggestions of topics and personnel for the forthcoming Blakiston volumes, this to be an enclosure in the mailing referred to in the previous vote. Still a third communication was authorized; namely, a return post card, to be prepared by the Managing Editor, who desires to obtain suggestions from our membership concerning

economists familiar with foreign languages and foreign economic literature. A fourth item was later authorized when the Secretary was empowered to widen the usefulness of the employment register at Atlantic City.

3. *Reports of the Secretary, Treasurer, and Finance Committee.* These reports, which are printed in the *Proceedings*, were read and accepted. Professor Sharfman suggested that much of the information contained in these reports is of importance to the Executive Committee in making its decisions on matters which come up at this meeting; that the committee is not prepared to approve or disapprove the many technical facts which are submitted for the first time when presented in these reports; and he suggested that preprints, if possible, would serve a very useful purpose. Professor Bell proposed that the fiscal year for the Association be changed to end September 30. Alternatively, it was suggested that the Secretary-Treasurer could prepare mimeographed reports before the annual meetings, reviewing the activities of the year and giving a preview of the financial condition of the Association on the basis of the data at hand.

It was VOTED that the President and Secretary submit plans for working out reports of the character referred to above for consideration of the Executive Committee at its spring meeting.

4. *Publications.*

a) *Report of the Managing Editor and Chairman of the Editorial Board.* A mimeographed report submitted by Professor Homan was accepted and ordered printed.

A panel of names for membership on the Editorial Board to fill vacancies caused by expiration of present terms was submitted by Professor Homan, and the following were approved: R. A. Gordon, to succeed N. S. Buchanan, and Arthur Smithies, to succeed Paul A. Samuelson.

It was VOTED to authorize dinner expenses for a meeting of the Editorial Board at Atlantic City.

It was VOTED to approve the establishment of free subscriptions and exchanges, these to be determined by the Managing Editor and the Secretary, to the number of one hundred additional subscriptions. The purpose of this action is to continue some of the subscriptions which have been carried for the past two years by the American Library Association with Rockefeller funds; to place our publications in the hands of foreign correspondents and like purposes.

It was VOTED to increase the salaries of Miss Doris Merriam and Miss Gertrude Tait, effective January 1, 1947.

It was VOTED to approve the budget of the Managing Editor of the *Review* as submitted; namely, total, \$22,000 (a \$4,200 increase).

b) *Papers and Proceedings, Handbook, and Directory.* The size and contents of the new volume of *Papers and Proceedings* was made the subject of discussion.

The Secretary was authorized to proceed with plans for the publication of the 1948 *Directory*.

c) *The Committee on Republications.* The committee was authorized to mail a circular to our membership, calling for suggestions for future volumes in the Blakiston series. (See above, under item 2.) A financial report, covering the first three volumes, was submitted by Professor Bell which showed that the income for the first two volumes has now almost reached the cost point and that the sale of the remaining inventory should net a small profit to the Blakiston Company and to the Association. Sales of the third volume are proceeding favorably and with a larger inventory, profits on this volume should be even greater. These results should be considered satisfactory, since it was not the design either of the Blakiston Company or of our Association to make money on this undertaking.

Professors Wolfe and Spengler reported on the *R.O.E.* project.

Professor Spengler reviewed the history of our efforts to obtain outside financial help from the Rockefeller, Falk, and Carnegie Foundations, and explained the apparent grounds for the rejection of our application. Appeal to the Alfred P. Sloan Foundation was not considered an appropriate move. For lack of outside support, the Executive Committee decided by mail ballot in July, 1946, to proceed on a limited scale, authorizing Professor Wolfe to conduct the preparation of two or three papers in selected fields which might be presented at the annual meeting as part of the program.

Professor Wolfe read a prepared statement, detailing the history of his experience in carrying out the above commission, pointing out the criteria used for selecting the fields to be reviewed and why his efforts to secure outstanding economists to prepare these papers proved futile. He reported that no part of the \$5,000 appropriated for this undertaking had been expended and proposed the following alternative action:

1. Give up the *R.O.E.* project and withdraw the \$5,000 appropriated.
2. Continue on a modest scale with Association funds, defining the project clearly as an Association activity and limiting the volume to a few fields of outstanding importance.

3. Try to educate the foundations as to the merits of the project and raise the necessary funds to finance it on the original scale.

After a protracted discussion of the desirability of publishing an *R.O.E.* volume or series of articles, of the possibility of getting outstanding young economists to take on the assignment with and without time limitation, of the propitiousness of the time and of the work already accomplished, the following motion was VOTED: That the existing committee (J. J. Spengler, C. D. Edwards, A. J. Wickens, W. B. Stewart, and E. M. Burns) be augmented by adding Wolfe, Homan, and Bell, and that the new committee so constituted re-explore the whole project and report back.

It was generally agreed that we should keep the project alive and salvage as much as possible of the work already done.

The members of the reconstituted *R.O.E.* committee, except W. B. Stewart and Aryness Joy Wickens, met on Saturday, January 25, and reported back to the Executive Committee at its Sunday morning session to the following effect:

Plan 1. The publication of ten or eleven articles of about forty pages each in a volume to be submitted to a commercial publisher for publication. This plan would involve an outlay of \$5,500 to \$6,000 (editor \$1,500 to \$2,000, assistant \$500, contingent \$500, contributors \$3,000).

Plan 2.

- a) The publication of a fewer number of articles or chapters of 150 to 160 pages as a supplement to the *Review* (which would involve estimated expenditures: editor \$750 to \$1,000, assistant \$250, contingent \$250, contributors \$1,000 to \$1,200, and printing \$2,000, or a total of from \$4,250 to \$4,700).

- b) If only a few articles are prepared and not on a single schedule, these could appear one at a time in the *Review*.

Eleven fields, with the names of possible authors, were presented by Professor Spengler. It was VOTED that the Committee on the Review of Economics be authorized to proceed (a) to solicit financial support from the American Philosophical Society, (b) with Plan 1, or (c) Plan 2, a or b, as described above.

The resignation of Professor A. B. Wolfe was reluctantly accepted and an expression of profound gratitude was VOTED him for his helpful co-operation. The interim experiment thus came to an end. Professor Howard S. Ellis was invited to serve as editor for the revived project. The amount of \$7,500 rather than the earlier appropriation of \$5,000 was authorized for the purpose.

5. Committee Reports.

- a) *Committee on the Undergraduate Teaching of Economics and the Training of Economists.* The report of Professor Horace Taylor, Chairman, was accepted, and it was VOTED to continue the present appropriation for the use of that committee. This means that the unused funds can be drawn upon. The question of authorizing a new subcommittee on graduate education in economics was postponed to the spring meeting.

- b) *Economic Opinion and Public Policy.* After listening to the report of the committee, read by Professor Davis in the absence of Professor Edwards, it was VOTED to discharge this committee and to consider the appointment of a new committee at the spring meeting. In communicating this message, the Secretary was instructed to express the hope of the Executive Committee that the semifinal report of the E. J. Working Committee on Agricultural Support Prices would eventually be completed and that the Committee on the Webb-Pomerene Act, E. S. Mason, Chairman, would also complete their report and that both reports would be published.

- c) *Committee on Research.* In the absence of Professor Leland, Professor Spengler read the report of this committee and it was VOTED to receive the report, approve its recommendations in principle. Further financing of the activities of the committee within present appropriations was left to the chairman of the committee in collaboration with the President and Secretary of the Association. Dr. D. H. Wallace called attention to the legal situation existing with respect to the accessibility of war materials in the National Archives. He also reported that Paul Webbink, of the Research Committee, suggests that any further activities of a lobbying nature would be harmful to the establishment of the National Research Foundation but urged each member of the Executive Committee to think up good examples of useful economic research and

supply these, together with names of persons, to Professor Talcott Parsons, who is compiling a book on the achievements and potentialities of research (which is not to be confused with a similar, more popular treatment by Stuart Chase).

d) *Honors and Awards*. This committee's report is due to be considered at the spring meeting. It was suggested that the President inquire of Professor Slichter, its chairman, whether he wishes to keep the committee alive until then.

It was VOTED that past presidents aged sixty-five and over and past secretaries regardless of age be honored with complimentary memberships. It was VOTED to grant complimentary memberships to all members of sixty-five years of age or older who have retired from their professional activities, provided that they have been members of the Association for twenty-five years or more.

e) *Honorary Members—Foreign*. Biographical sketches of the seven foreign economists whose names were included on the original list of the Willits committee having been mailed earlier to the members of the Executive Committee, the matter was presented for consideration and the following were elected: Karl Gunnar Myrdal, Bertil Ohlin, and Lionel C. Robbins. Professor J. S. Davis was appointed chairman of the new Committee on Foreign Honorary Members. This committee is to present a new panel of names for consideration by the Executive Committee next year.

6. *Reports from Representatives*.

a) *American Council of Learned Societies*. In the absence of Professor Knight, Professor Bell reported on the activities of the A.C.L.S. and in particular the revised by-laws which if adopted at the early meeting of the Council will call for ratification by the Executive Committee at its spring meeting. The Executive Committee is deemed to have power to act on this matter, subject to ultimate ratification at the annual business meeting of the Association.

b) *Social Science Research Council*. Professor Spengler reported the activities of the S.S.R.C. during the past year. It was pointed out that two representatives of the Association will need to be selected at the spring meeting of the electoral college.

c) *National Bureau of Economic Research*. Dr. Wallace reported on the activities of the N.B.E.R.

7. The present incumbents of the offices of managing editor, secretary-treasurer, and counsel were re-elected for three-year terms.

8. The selection of the Hotel Continental as headquarters for the 1947 limited meeting at Chicago was ratified, and it was VOTED to hold the 1949 meeting during the Christmas recess, at the Grand Central group of hotels in New York with the Allied Social Science Associations, at their option. It was VOTED to consider at the spring meeting the selection of the meeting place for 1948. The President and Secretary were requested to supply further information on two (Montreal and French Lick) of the five places being considered, Chicago, Boston, and Cleveland being the remaining three. March 28 and 29 were selected as dates for the spring meeting of the Executive and Nominating Committees, to be held at Princeton if possible.

9. *New Business*. President Paul H. Douglas submitted the names of the nominating committee, indicating that Professor I. L. Sharfman had agreed to accept the chairmanship. The names of the nominating committee, together with the list of offices to be filled for 1948 and a note on nomination and election practices and procedures, is to be sent in the mailing to the general membership referred to in the minutes above, and names and requests for suggestions are to appear also in the March and June numbers of the *Review*.

It was VOTED to regretfully decline the request of Professor E. M. Hoover and others who seek financial aid for the translation of A. Loesch on location theory.

It was VOTED to empower the Secretary to duplicate or otherwise make more widely available the materials collected at the Employment Register at Atlantic City. An amount up to \$500 was authorized for this purpose. A report of the results is to be submitted. Notice to members may be included in the mailing referred to previously in the minutes.

Requests from various government and other agencies for co-operation were reported and discussed; e.g., the U.S.A.F.I. matter (J. S. Davis, I. L. Sharfman, and A. B. Wolfe); the State Department's request for an advisory committee was referred to Clair Wilcox for further inquiry; the Institute of International Education and the American Documentation Institute matter were referred to the President and Secretary.

Adjourned.

ACTIVITIES AND OPERATIONS

Annual Meetings. The Cleveland meeting last year was the first one held on a national basis since New York, 1941. Even so, it proved to be one of restricted character on account of limited hotel and transportation facilities. It was held at a time (January 24-27) not particularly well suited to the schedules of most academic members, and although a few allied associations, with overlapping membership, met concurrently, the program was separately planned and executed.

This year we again met with the same organizations but with an independently planned program. Only a few joint sessions were arranged. However, the printing of a joint program proved feasible.

The registration exceeded 1,700 compared to last year's total at Cleveland of 932. These include members of the American Statistical Association. The total attendance was probably nearer 2,500, since the 2,500 programs were completely exhausted and since attendance usually exceeds registration by several hundred. Members are not sufficiently conscientious in performing their duty to register promptly.

The time for an over-all meeting with the allied social science group has not yet come, since nowhere are we able to engage sufficient hotel space to accommodate a large attendance. This condition promises to persist yet another year. The flexibility of plans is further complicated by the fact that several of the larger learned societies, e.g., American Association for the Advancement of Science, American Historical Association, and Modern Language Association, have engaged the larger hotels in New York and Chicago during the Christmas recess period for some years ahead, and these commitments conflict with our desire to move alternatively from East to West. Rather than continue our meetings another year in the East, the Executive Committee has decided to meet in Chicago during the Christmas holiday (1947) at Hotel Continental on the North Side (outside the Loop) and again with a narrower cluster of allied associations rather than with the larger group. If in 1948 we return to the East, we will continue to move in the competitive orbit with the larger organizations referred to above. We are considering the implications of these facts and hope to solve the dual problems of how to fit our meetings into the pattern and how to arrange periodical joint meetings in the future with the allied social science group.

Membership. In the 1944 Report of the Secretary a chart was published, showing the growth of the Association's membership and subscribers from 1886 to 1945 (see May, 1945, *Proceedings*, page 459). A total of 917 members and subscribers have been added to our rolls during the past year. Our membership now numbers 4,662 and subscribers 2,161—a total of 6,823. This represents an uninterrupted growth since 1933. The increase in the number of junior members from 64 to 153 is probably a reflection of the heavy graduate school registration in universities as well as of a growing recognition of the opportunity which the Association makes available to younger economists who see advantages in establishing their professional affiliations early in their career. The list of subscribers is increasing even more rapidly than our

members. In earlier years subscribers represented from 12 to 20 per cent of the total, and now amount to over 30 per cent.

Geographical Distribution. In the same source (page 460) is a table, showing the geographical distribution of members and subscribers for selected years, 1919 to 1943. A count made as of June 15, 1946, and tabulated in the 1946 *Handbook* (pages 142-143) shows a continued concentration of members and subscribers in the north eastern and middle sections of the country with a slight falling off in the southeast, southwest, and northwest. This had been a year of marked shifting about in our membership list. We have had to record some 1,400 changes of address. While a large number of these represent shifts from A.P.O. and F.P.O. to civilian addresses, there have been movements from other temporary to permanent addresses. The exodus from Washington, however, has not been as great as might have been expected. The number of foreign members and subscribers has reached new heights; members are back to 1933 totals (decreases are shown for Europe and Australasia and increases in North and South America), but there are increases all along the line in subscribers, especially large numbers in Europe, Africa, Australasia, and in North, Central, and South America—a result which is partly accounted for by American Library Association subscriptions for foreign libraries and by a number of USIS subscriptions. We have accumulated inventories during the war years and are now in process of filling subscription orders and we are providing sufficient inventory to meet demands of those libraries whose A.L.A. subscriptions expire and who may want to continue on their own resources thereafter.

No group classification of our new members by fields of specialization has been made this past year. We ceased sending out questionnaires of the "who's who" type pending a revision of our classification, which is now in progress. We are making plans for a new edition of the directory to be issued probably in 1948.

Publications. For the progress of the *Review* and the activities of the Board of Editors members are referred to the Report of the Managing Editor.

The *Papers and Proceedings* of the 58th annual meeting of the Association held in January was again issued separately in May. The volume proved to be an especially large one, the pages numbering 948. This is accounted for by the fact that we were responsible for the publication of all papers presented at Cleveland and undertook to publish even those papers presented at the joint sessions with the American Finance Association—papers, incidentally, which this organization reprinted from the type which was set up for our volume and distributed to its membership. Also, since the Cleveland meeting was the first to be held on a national scale for some time, we deemed it desirable to make the volume as complete as possible. Still another reason for the volume bulking large was the length of a number of discussion papers growing out of the reviews of main papers which had been submitted a month or more before the meetings and it was not deemed desirable to hold these papers to conventional length. However, this should not serve as a precedent for future years. The *Proceedings*, consisting of pages 867 to 948, have been reprinted and distributed to officers and others, under separate cover.

A handbook of names of members and subscribers was published and distributed as a supplement to the September number of the *Review*. It contained the usual information, a geographical classification, and statistical materials. Though it does not contain the type of data found in the special "who's who" *Directory* of 1942 it does furnish an up-to-date list of names and addresses and relieves some of the pressure we have felt on the use of our mailing list. A total of 6,900 copies were published of this 113-page volume, at a cost of \$2,036. The edition is already out of print.

The annual information booklet was re-edited and distributed to members interested and to prospective members. It continues to be a useful instrument in meeting inquiries concerning the purpose, organization, and activities of the Association.

Photographs of past presidents Sharfman, Willcox, Carver, and Commons appeared as frontispieces to the numbers of the *Review* this year. The usual list of announcements of vacancies and applications for positions has appeared in the back of each number of the *Review*. This service has proved its usefulness but will never expand to very substantial proportions because of the occasional appearance of such announcements. Three months' delay rules out a large number of applications. This year we experimented at the annual meeting at Atlantic City with an "employment register," a spot at the registration desk where candidates for prospective positions filed their applications and where parties looking for economists for teaching and other positions could find the names and addresses of prospects and where both parties could arrange to meet face to face.

The Rockefeller Foundation-supported subscriptions of the American Library Association terminate this year. The A.L.A. has been buying subscriptions with money furnished by the Rockefeller Foundation during the past several war years: 15 in 1939, 50 in 1940 and 1941, and 70 from 1942 through 1946. These orders have now terminated, since the Foundation feels that the war emergency is sufficiently relieved to make such action unnecessary and all recipients of journals have been notified that they will themselves be responsible for the continuation of the subscriptions.

In addition to the above, we have had about 50 A.L.A. subscriptions to foreign libraries which will expire this year. We have no way of knowing whether or not renewals of these subscriptions will be forthcoming, but we are currently ordering a sufficient number of copies to provide for such replacement demands.

Committee Activities. The Committee on Economists in the Public Service, M. A. Copeland, Chairman, submitted its excellent final report at the last annual meeting (see *Papers and Proceedings*, 1946, pages 911-917) and has been discharged. Other standing and special committees which have been continued and some of which have been quite active this year are: Committee on Republications, H. S. Ellis, Chairman; on Review of Economics (Contemporary Development of Economic Thinking and Information), J. J. Spengler, Chairman; Teaching of Economics and Training of Economists, Horace Taylor, Chairman; Economic Opinion and Public Policy (Consensus Reports), C. D. Edwards, Chairman; Economic Research, S. E. Leland,

Chairman; Honors and Awards, S. H. Slichter, Chairman; Foreign Honorary Members, E. G. Nourse, Chairman; and Finance, R. C. Osgood, Chairman. The following comments deal with the activities of some of these committees.

Republication Volumes. The five-year contract with the Blakiston Company expires this year. The first three volumes have been well received, and since the renewal of this co-operative agreement is likely to be arranged, Professor Ellis, Chairman of the committee, prepared a questionnaire which was circulated at Atlantic City and mailed to a wider circle of economists soliciting suggestions for topics of future volumes. It is hoped that many who have found the earlier volumes useful will take advantage of this opportunity to give the committee the benefit of their judgments concerning the selection of worth-while articles of lasting value which should be made accessible in this form.

The sale of the first three volumes, for which an accounting has been rendered, does not yet show profits, but there is every prospect of future sales of remaining inventory resulting in some net gain on each of the volumes.

Review of Economics. As a result of the protracted consideration given this project (see final report of the Committee on Development of Economic Thinking and Information, *Papers and Proceedings*, May, 1946, pages 922-933, and round table discussion, pages 784-788) the Executive Committee at its April meeting accepted the committee's report and authorized the President to appoint an editor (A. B. Wolfe) who was empowered to proceed with the undertaking while Professor Spengler continued his efforts to enlist outside interest and financial support on the basis of our willingness to raise our guarantee to \$10,000. Since outside support was not immediately forthcoming, the Executive Committee, by mail ballot (July 26), authorized Professor Wolfe to direct the preparation of two or three papers to be presented on the program at the annual meetings. It was thought that these might serve subsequently as chapters of our proposed volume on the *Review of Economics*. Also, the editor's outline or plans for a complete volume or volumes was to constitute part of his report. The amount of \$5,000 was appropriated for this purpose.

No part of the \$5,000 appropriation for the *R.O.E.* editor has yet been expended. The editor's experience in inviting outstanding economists to prepare review papers in selected fields is one which throws some light on the difficulties involved in this undertaking, and the subsequent failure in obtaining outside financial help reopens problems which call for further consideration by the Executive Committee. Is the project one for which there is an insistent and general demand strong enough to interest and to enlist the efforts of "outstanding" economists and to warrant the expenditure of Association funds (with or without subsidy)? A good deal of work has already been spent in defining and organizing a project which seems worth while to many persons who have given the matter much thought. Is there enough momentum to carry the venture through along proposed lines, or should some other means be employed to accomplish the same ends? The reports of Editor Wolfe and Chairman Spengler cast some light on these questions.

Teaching of Economics and Training of Economists. Since last year's

report and round table session (*Papers and Proceedings*, 1946, pages 937-943, 845-863) this committee and its ten subcommittees have continued their investigation of the various phases of this important subject, and a series of sessions devoted to the discussion of results were held during the three days of the annual meetings at Atlantic City.

In conjunction with the Subcommittee on the Training of Teachers of Economics, a conference was organized by the Teaching Institute of Economics at the American University, Washington, D.C., which is operated under a grant from the Alfred P. Sloan Foundation. This conference, held in Washington, August 19-31 and attended by a number of college teachers, is described in a communication from Director N. Arnold Tolles in the December number of the *Review*.

For an account of the committee activities, members are referred to the report of Professor Horace Taylor, Chairman.

In addition to the sum of \$600, the amount unexpended from last year's appropriation, the amount of \$1,000 was appropriated for the use of this committee for the current year.

Economic Opinion and Public Policy. The report of this committee (see *Papers and Proceedings*, pages 832-841) was considered at the April meeting of the Executive Committee, at which time Part I of the report, dealing with Reports and Statements of Opinion Under Association Sponsorship, was referred back to the committee for further study and report, and certain items of Part II of the report (numbers 1, 2, 3, 5, and 6, number 4 being omitted) were approved as conditions governing the use of the Association's name which might serve as a guide to the Secretary insofar as these are applicable in this matter. The present committee is asked, therefore, to review the previous experiments on panel reports and expert polls and to suggest new experiments to be conducted in connection with the annual program if so approved by the President. As a result of this study and experience more specific recommendations are expected. The *Ad Hoc* Committee on the Webb-Pomerene Act, E. S. Mason, Chairman, has not yet reported, and the Report of the Committee on Agricultural Support Prices, E. J. Working, Chairman, has not materialized in final form. No further experiments either of the panel report or the poll types have been undertaken.

Research. A résumé of the Association's efforts to stimulate research—a statement of the assignment made to the present Committee on Research—is given in last year's Secretary's Report (*Papers and Proceedings*, May, 1946, pages 879-880). During the past year the committee has held several meetings and has made progress in organizing subcommittees to study and report on the preservation of war records and exposing promising research projects utilizing such material in the following fields: Price Control and Rationing (R. B. Heflebower), Liquid and Solid Fuels (J. S. Bain), Labor and Manpower Problems (H. D. Wolf), and Economic Problems of Interest to the Department of State (W. S. Hunsberger). An additional report was submitted at Atlantic City on War Production Board records by David Novick and on World War II Records Project by Philip M. Hamer.

A further analysis of the questionnaire on ways and means of improving research sent to the members last year is included in the committee's report.

The \$1,500 appropriated last year for field work and other expenses has not yet been exhausted.

Committees Appointed During the Year:

Committee on Local Arrangements	Committee on Classification
J. Weldon Hoot	James Washington Bell, Chairman
Committee On Elections	Paul T. Homan
John H. Wills, Chairman	Fritz Machlup
Walter E. Hoadley, Jr.	Joseph J. Spengler
James Washington Bell, <i>Ex Officio</i>	Frank W. Fetter
Finance Committee	Nominating Committee
Roy C. Osgood, Chairman	Charles O. Hardy, Chairman
Charles C. Wells	J. Frederic Dewhurst
James Washington Bell	Joseph S. Davis
Committee on Review of Economics	David M. Wright
Albert B. Wolfe, Editor	Oliver C. Lockhart
	Mildred B. Northrop

Representatives of the Association on Various Occasions:

Inauguration of Arthur Holly Compton as Chancellor of Washington University

Isaac Lippincott

Inauguration of James Lewis Morrill as President of the University of Minnesota

Roy G. Blakey

Centennial Celebration of founding of MacMurray College

Edgar W. Martin

Inauguration of Albert Ray Olpin as President of University of Utah

Thomas A. Beal

Inauguration of Martha Lucas as President of Sweet Briar College

Gladys Boone

Inauguration of Richard Leighton Greene as President of Wells College

Jean S. Davis

Inauguration of Martin Dewey Whitaker as President of Lehigh University

Frederick A. Bradford

Inauguration of J. H. Case as President of Washington and Jefferson College

Maurice C. Waltersdorf

Sesquicentennial Celebration, University of North Carolina

John B. Woosley

Fiftieth Annual Meeting of the American Academy of Political and Social Science

George W. Taylor

Emory R. Johnson

Karl R. Bopp

- Inauguration of Arthur G. Coons as President of Occidental College
Dudley F. Pegrum
- Celebration of Fiftieth Anniversary, State College for Women, Montevallo, Alabama
James Holladay
- Inauguration of G. M. Modlin as President of the University of Richmond
Raymond B. Pinchbeck
- Inauguration of Thomas Jones as President of Earlham College
Claude L. Stinneford

Mailing List. The use of the mailing list was granted to the following:

- Office of Price Administration
To send Report of War Mobilization Director, *Battle for Production*
- Committee for Economic Development
To send *Toward More Production, More Jobs and More Freedom* and *Agriculture in an Expanding Economy*
- Columbia University
To send announcement of a new School on International Affairs
- C. F. Remer, University of Michigan
To poll membership on British loan
- W. R. Grace and Company
To send to selected list general informational material regarding foreign trade and the United States Merchant Marine, including a reprint from the *Saturday Evening Post*
- Royal Institute of International Affairs
To promote *International Affairs*
- General Motors Corporation
To send pamphlet containing speech by Ludwig Mises
- Association of American Railroads
To send material of interest to members, including *Economic and Transportation Prospects*
- American University Teaching Institute of Economics
To send notice regarding Summer Conference on Teaching of Economics
The Manchester School
- To send out advertising matter
- Public Administration Service
To send advertisement for *Sales Taxes and Other Excises*, by R. G. and G. C. Blakey
- Philip Cortney
To send copies of "Keynes' Posthumous Message," reprinted from *Commercial and Financial Chronicle*
- Twentieth Century Fund
To send material about *For This We Fought*
- Donald B. Woodward, Committee on Public Debt Policy
To send monographs to members

It is with regret that the names of the following persons have been removed from our active membership list, notice of their deaths having been received during the year:

Robert S. Aspinwall	John M. Keynes
Leonard P. Ayres	Gustav A. Kleene
Gilbert H. Barnes	Francis H. McLean
Irvin Bendiner	Harry Mehlman
Alva H. Benton	William F. Musbach
William W. Carman	Corliss L. Parry
Sir John Clapham (Honorary Member)	Harald S. Patton
Victor S. Clark	Arthur G. Peterson
Thomas F. Conway	Eugene R. Pike
McPherrin H. Donaldson	Maurice H. Robinson
Edwin F. Dummerer	Leonard A. Salter, Jr.
Edwin F. Gay	Henry C. Simons
John H. Gray	James G. Smith
Eugene A. Heimann	Alan N. Steyne
Charles W. Holloway	H. John Stratton
Edwin W. Kemmerer	Orlando F. Weber
	Leo D. Woodworth

Respectfully submitted,

JAMES WASHINGTON BELL, *Secretary*

EXHIBIT I PUBLICATION COSTS

Year ¹	PROCEEDINGS		Cost	Number of Pages	HANDBOOKS	
	Number of Pages	Number of Copies			Number of Copies	Cost
1930	222	4,300	\$1,353.91			
1931	308	4,300	1,919.18	88	4,200	\$ 589.54
1932	316	4,200	1,819.75			
1933	216	4,000	1,284.85	88	3,900	522.71
1934	232	3,700	1,192.91			
1935	248	4,000	1,347.88			
1936	360	4,200	2,037.90	58	4,100	454.36
1937	344	4,300	1,922.03			
1938	200	4,500	1,234.10	112	4,500	1,118.84 ²
1939	288	4,600	1,785.91			
1940	444	4,900	2,658.12	108	5,000	822.58
1941	479	5,200	3,294.45			
1942	548	5,400	3,909.79	208	5,500	1,775.72 ²
1943	535	5,500	3,652.56			
1944	470	5,800	3,350.40			
	144	5,900	1,215.22 ³			
1945	536	6,400	4,502.84			
1946	960	6,700	8,149.90	143	6,900	2,035.71

¹ This is the year of publication and pertains to the meeting of the preceding year. The figures are published in the subsequent year.

² "Who's who" volumes.

³ Part of papers presented at annual meeting published as supplement to June number.

EXHIBIT II

MEMBERS AND SUBSCRIBERS

	Total 12/11/45	Added	Removed	Gain or Loss	Total 12/7/46
Annual members	3,971	673 ¹	268 ²	405	4,376
Junior members	64	138 ³	49 ⁴	89	153
Family members	56	18 ⁵	6	12	68
Complimentary members ...	17	7	3	4	21 ⁶
Life members	31				31
Honorary members	15		2	2	13
Subtotals	4,154	836	328	508	4,662
Subscribers	1,752	743	334	409	2,161
Totals	5,906	1,579	662	917	6,823

¹ Includes 28 junior members changed to annual.

² Resigned, 60; nonpayment of dues, 111; died, 29; lack of address, 44; changed to junior members, 23; changed to family member, 1.

³ Includes 23 annual members changed to junior.

⁴ Includes 28 junior members changed to annual.

⁵ Includes 1 annual member changed to family.

⁶ Includes 9 complimentary members who do not receive the publications of the Association.

REPORT OF THE TREASURER OF THE ASSOCIATION FOR THE YEAR ENDING DECEMBER 7, 1946

The following summary shows a comparison of the chief sources of income and the major expenditures for the fiscal years ending December 11, 1945, and December 7, 1946.

	1945	1946	Increase or Decrease
<i>Income</i>			
Membership dues	\$20,260	\$22,076	\$ 1,816
Interest and dividends	3,862	3,547	315
Profit on sale of securities	2,162	4,187	2,025
Publications income	11,164	14,144	2,980
Total income	\$37,448	\$43,954	\$ 6,506
<i>Expenses</i>			
Administrative and operating	\$ 9,642	\$11,224	\$ 1,582
Publications (<i>Review, Papers and Proceedings, Handbook</i>)	22,890	28,857	5,967
Total expenses	\$32,532	\$40,081	\$ 7,549
Net operating income	\$ 4,916	\$ 3,873	\$ 1,043
Additional appropriations for committees		1,000	
Net income		\$ 2,873	

Appropriations have been made by the Executive Committee during the past two years, some of which have been made on a contingent basis and others made but not utilized. The record can be briefly summarized in the table following:

ANALYSIS OF FUNDS APPROPRIATED IN 1946

	Unexpended Balance 12/11/45	Appropriation 1946	Expended During Period	Unexpended Balance 12/7/46
1. Committee on <i>R.O.E.</i>	a	\$5,000.00		\$5,000.00 ^b
2. Committee on Teaching	\$ 600.00 ^c	1,000.00	\$200.00	1,400.00
3. Committee on Research	1,176.50 ^d	Carried over	238.17	938.33

^a In December, 1945, the sum of \$10,000 was appropriated contingent upon raising \$25,000 outside.

^b Renewed project cancels this appropriation and substitutes \$7,500.

^c Original appropriation \$1,000.

^d Original appropriation \$1,500.

A continued growth in our membership and subscription list accounts for a large part of our increased income although income from advertising and sales of copies contributed a greater share than in any previous year. Interest and dividends fell off somewhat, but we took a rather substantial profit from sales of securities. This latter is a nonrecurring item, and since we reinvested the proceeds in government bonds it will have the effect of lowering future income from investments from that source.

Our total expenses rose by an amount even greater than our income. The items chiefly responsible for this result are the extraordinarily large volume of *Papers and Proceedings* this year (\$8,150 for 6,700 copies compared to

the previous volume which cost \$4,500 for 6,400 copies) and the publication of 6,900 copies of the *Handbook* (at \$2,035) and also the heavier administrative and operating expense (\$1,582). This latter item reflects the costs of servicing a growing organization during a period when costs are rising and marked transitional changes are taking place. Under these circumstances it is significant that the expenses of our operations have shown such small increase. This is particularly true in the case of the *Review* and the Managing Editor's office.

The net operating revenue (\$3,873) is only slightly under that of last year (\$4,916). Allowing for contingent liabilities our financial condition is substantially the same this year as last.

For an historical view of our financial condition, attention may again be drawn to the Report of the Treasurer in the May, 1945, *Proceedings*, pages 472-477, where charts and graphs are presented, showing net annual income or loss and accumulated surplus, 1909-45, security holdings at cost and at market, 1920-44, and return on stocks and bonds held in the investment account, 1925-44. Unappropriated surplus at the end of this period stands at \$68,887 (see Auditor's Report, Exhibit I) compared to \$66,014 at year end December 11, 1945. In the *Proceedings* of May, 1946 (pages 892-894) may be found a report on the Long-run Financial Policy of the Association which should be of interest to members who are concerned about the use we plan to make of our resources.

The tables following bring up to date the history of our investments and the rate of return on these holdings. Figures for cost and market price of stocks and bonds are taken from the Report of the Finance Committee. Income figures may be found in the Auditor's Report of December 7, 1946. The rate of return is roughly determined by the ratio of interest and dividends received to cost and to market values. This figure shows a yield of 4.3 per cent on cost of holdings and 3.9 per cent on market quotations of November 27 and 3.8 per cent on market quotations of December 31.

The list of our stock and bond holdings, with cost and market values, may be found in the Report of the Finance Committee. Again this year we should express our heartfelt appreciation for the considerate and valuable service rendered by Roy C. Osgood, Chairman, and Charles C. Wells in connection with the administration of this fund.

Respectfully submitted,

JAMES WASHINGTON BELL, *Treasurer*

INVESTMENT PORTFOLIO

Year	At Par	Cost			Market
	Bonds	Bonds	Stocks	Total	Stocks and Bonds
1925	\$25,000	\$24,601.75		\$24,661.75	
1926	27,000	26,623.25		26,623.25	
1927	29,000	26,688.45		28,688.45	
1928	29,000	28,633.45		28,633.45	
1929	31,000	30,569.48		30,569.48	
1930	31,000	32,439.48		32,439.48	\$32,635.40
1931	39,500	39,134.48		39,134.48	32,307.44
1932	40,500	41,134.48		41,134.48	33,239.70
1933	33,500	32,962.48	\$ 3,954.23	36,916.71	31,522.50
1934	31,500	30,989.48	3,954.23	34,943.71	34,714.00
1935	16,000	15,280.48	28,114.50	43,394.98	50,338.72
1936	17,000	16,260.13	33,712.57	49,972.70	62,991.00
1937	20,000	19,160.91	37,399.20	56,560.11	52,064.75
1938	22,000	20,180.95	38,302.20	58,483.15	58,598.88
1939	22,000	20,039.57	41,155.95	61,195.52	61,529.38
1940	25,000	22,519.80	41,155.95	63,675.75	60,553.88
1941	25,000	22,439.81	51,155.95	63,595.76	58,606.11
1942	27,000	24,651.12	41,556.06	66,207.18	58,211.88
1943	28,000	23,822.54	40,071.31	63,893.85	66,012.12
1944	30,000	25,731.51	46,033.81	71,765.32	81,844.01
1945	40,000	36,705.95	44,955.81	81,661.76	103,574.76
1946	40,000	37,964.08	47,422.89	85,386.97	93,682.61*

* As of November 27, 1946. The December 31 total was \$96,085.00.

RETURN ON INVESTMENTS

Year	Bonds	Stocks	Total	Rate of Return on Cost
1925	\$1,350.00		\$1,350.00*	
1926	1,410.00		1,410.00*	
1927	1,524.70		1,524.70†	
1928	1,642.77		1,642.77†	
1929	1,575.44		1,575.44†	
1930	1,695.21		1,695.21	5.22%
1931	1,886.81		1,886.81	4.82
1932	2,014.36		2,014.36	4.89
1933	1,679.49	\$ 108.57	1,789.06	4.84
1934	1,593.13	218.07	1,811.20	5.18
1935	1,022.96	680.70	1,703.66	3.92
1936	801.77	1,597.63	2,399.40	5.00
1937	884.87	2,689.62	3,574.49	6.31
1938	928.04	2,063.02	2,991.06	5.11
1939	978.79	1,781.52	2,760.31	4.51
1940	1,037.56	2,182.46	3,220.02	5.06
1941	1,088.97	2,497.35	3,586.32	5.64
1942	1,306.49	2,186.17	3,492.66	5.28
1943	1,133.97	2,094.47	3,228.44	4.90
1944	992.67	2,410.57	3,403.24	4.60
1945	1,479.99	2,488.85	3,968.84	4.71
1946	1,213.65	2,441.13	3,654.78	4.30

* Estimated income for year.

† Certificate of deposit interest included.

REPORT OF THE FINANCE COMMITTEE

The summary table following shows the cost and market value of the Association's holdings of bonds, preferred stock, and common stock. The cost figures are as of the close of business, November 27, 1946, and the market figures are for November 21, 1945, and for two dates of this year—November 27, to compare with previous fiscal year figures, and December 31, 1946. This latter figure is included since there is some thought of changing the fiscal year and these dates may prove useful for future reference.

	<i>Cost of Holdings</i>	<i>Market Value or Last Sale</i>		
	<i>Held on 11/27/46</i>	<i>11/21/45</i>	<i>11/27/46</i>	<i>12/31/46</i>
Bonds	\$37,964.08	\$ 40,241.25	\$38,484.85	\$38,572.50
Stock	47,422.89	63,333.51	55,197.76	57,512.50
	<u>\$85,386.97</u>	<u>\$103,574.76</u>	<u>\$93,682.61</u>	<u>\$96,085.00</u>

During the past fiscal year the following securities were sold or presented for payment when called:

	<i>Cost</i>	<i>Sale</i>	<i>Profit</i>
20 Shares Erie Railroad Company Common	\$ 279.13	\$ 403.00	\$ 123.87
50 Shares Mesta Machine Company Common	2,007.37	2,841.55	834.18
25 Shares J. C. Penney Company Common	1,767.90	3,716.25	1,948.35
50 Shares Standard Oil of California Common	2,097.27	2,382.50	285.23
\$2,000 N.Y. Central and Hudson River R.R. 4½% Re- funding and Improvement Series A, 2013	1,735.00	1,927.50	192.50
\$5,000 Southern Pacific Company 4¼%, 1969	4,282.50	5,085.00	802.50
	<u>\$12,169.17</u>	<u>\$16,355.80</u>	<u>\$4,186.63</u>

In this year we added to our holdings:

	<i>Cost</i>
100 Shares Gulf Oil Corporation \$25.00 Par Value Common	\$6,212.50
50 Shares Kroger Grocery and Baking Company Common	2,406.25
\$7,000 United States Treasury 2½% Bonds 12/15/72/67	7,275.63

The committee has read an illuminating report on the Association's investment account prepared by Professor W. H. Steiner, of Brooklyn College. The report contains a breakdown of our investment holdings into common and preferred stocks and bonds, the number of and size of issues held, classification of issues according to type (industrial, public utility, and so forth), quality and maturity, the activity of accounts, cost and market values, yield and capital appreciation or depreciation, and, finally, according to realized and unrealized gains. This latter consideration prompts brief comment on our policy.

We have previously stated in these reports that our conduct in managing this fund is motivated by a desire to conserve our resources, get a reasonably stable income and a favorable yield, yet derive some advantage from capital appreciation without, however, attempting to risk realizing on trading profits. For instance, when it was decided in March, 1946, to take profits from J. C. Penney, to shift Mesta Machine to Kroger Grocery and Baking and Standard Oil of California to Gulf Oil and to buy United States govern-

ments from the proceeds of Erie, Penney, and the railroad bonds, we considered the market situation somewhat unstable, with a slight recession not unlikely. It was thought advisable to invest cash proceeds in United States bonds and hold the \$14,000 worth of bonds as an investment but available for conversion into other bonds and stocks in case the market should slip badly. It was not our belief that any substantial recession would take place this year and the weakness in the market did not appear so serious as to warrant wholesale liquidation with the intent of holding cash for buying bargains in a bear market at a later time.

Critics might point out that the management of our account is greatly simplified by its tax exemption—which could mean much to traders making it a business of going in and out of the market. Indeed, it is often tempting to buy and sell on a short-run basis without the tax deterrent staring us in the face, but the responsibility of trusteeship weighs heavily against indulging in such risky practice. To repeat, the committee is governed in its conduct by a desire to see the Association's funds conservatively invested in securities yielding a reasonable rate of return over a long-run period.

Listed below are the bonds, preferred stock, and common stock holdings of the Association showing cost and market values as of November 21, 1945, and November 27, 1946.

Amount	Issue	BONDS			Value	
		Int.	Due	Cost	Market 11/21/45	Last Sale 11/27/46
\$5,000	Central New England Ry., 1st Mtge.	4%	1961	\$4,755.00	\$5,087.50	\$4,393.75
3,000	Chicago and Northwestern Ry., 2nd Mtge.	4½	1999	2,431.50	2,730.00	2,370.00
2,000	Grand Trunk Western Ry. Co., 1st Mtge., 50-year	4	1950	1,855.45	2,145.00	2,092.50
3,000	Illinois Central R.R., St. Louis Div.	3	1951	2,212.50	3,056.25	2,797.50
3,000	New York Central and Hud- son River R.R., Ref. and Imp., Series A	4½	2013	2,437.50	2,737.50	2,257.50
1,000	Pennsylvania R.R. Co., Gen. Mtge., Series D	4½	1981	986.50	1,267.50	1,125.00
1,000	Pere Marquette Ry. Co., 1st Mtge.	3½	1980	1,000.00	1,026.25	1,035.00
1,000	Reading Co., 1st and Ref., Series D	3½	1995	1,010.00	998.75	975.00
3,000	U. S. Defense Bonds, Series G	2½	1954	3,000.00	3,000.00	3,000.00
3,000	U. S. Government	2	1953/51	3,000.00	3,112.50	3,063.60
8,000	U. S. Treasury Bonds	2½	1972/67	8,000.00	8,080.00	8,200.00
7,000	U. S. Treasury Bonds (12/15)	2½	1972/67	7,275.63		7,175.00

STOCKS

		<i>Value</i>	
		<i>Market or Last Sale</i>	
<i>Number of Shares of Preferred Stock</i>		<i>Cost</i>	<i>11/21/45 11/27/46</i>
25	Crane Co., 3½% Cum. Pfd.....	\$2,550.00	\$2,675.00 \$2,525.00
14	Glidden Co.....	735.00	787.50 577.50
25	International Harvester Co.....	3,686.63	4,637.50 4,537.50
<i>Number of Shares of Common Stock</i>			
25	Chesapeake and Ohio R.R. Co.....	1,309.07	1,415.63 1,293.75
55	Commonwealth Edison Co.....	1,525.51	1,842.50 1,787.50
50	Genral American Transportation Corp.....	3,084.30	2,981.25 2,462.50
100	General Electric Co.....	2,738.19	4,687.50 3,450.00
50	General Motors Corp.....	2,057.47	3,612.50 2,506.25
58	Glidden Co.....	1,635.72	2,146.00 2,349.00
100	Gulf Oil Corp., \$25.00 Par Value.....	6,212.50	6,050.00
50	Houston Lighting and Power.....	3,237.50	4,250.00 4,300.00
50	Kroger Grocery and Baking Co.....	1,297.22	2,362.50 2,462.50
50	Kroger Grocery and Baking Co.....	2,406.25	2,462.50
25	Liggett and Myers Co., B.....	2,018.13	2,478.13 2,356.25
50	Link-Belt Co.....	2,524.15	2,868.75 2,412.50
25	J. C. Penney Co.....	1,110.38	1,037.50
50	Procter and Gamble Co.....	2,459.72	3,200.00 2,900.00
50	Standard Brands, Inc.....	852.62	2,125.00 1,752.50
50	Union Carbide and Carbon Corp.....	2,867.88	4,950.00 4,500.00
100	Wayne Pump Co.....	3,114.65	4,250.00 3,475.00

Respectfully submitted,

ROY C. OSGOOD, *Chairman*

CHARLES C. WELLS

JAMES WASHINGTON BELL

THE INVESTMENT ACCOUNT OF THE AMERICAN ECONOMIC ASSOCIATION

By WILLIAM H. STEINER
Brooklyn College

At the close of 1945 the investment account of the American Economic Association consisted of securities costing over \$81,000 and having a market value of over \$103,000, while showing a current return of slightly under \$4,000. The account dates back to the close of the first World War, when the treasury of the Association was depleted and a special finance committee was appointed. The committee's efforts met with success and made possible an increase in the portfolio (at cost) from \$4,000 in 1920 to \$24,600 in 1925. During these years the Treasurer of the Association himself supervised investments, reporting his actions to the Executive Committee for its approval. In 1925 the supervision of the investment of the funds of the Association was transferred to a presidentially appointed standing committee, that on finance, composed of the Treasurer and two other members. In that year the securities were first placed in a custodian account with a banking institution, and this has been the only expense of operation.¹

Since 1925 the account must be regarded as essentially a professionally managed fund. The initial committee included Dr. C. H. Crennan, of the Continental National Bank of Chicago, as chairman and Mr. Waddill Catchings, of Goldman Sachs and Company of New York. In 1931 Mr. G. B. Roberts, Jr., of the National City Bank of New York, replaced Mr. Catchings and in 1935 he was in turn replaced by Mr. C. C. Wells, of Mullaney, Ross and Company. In 1937 the chairman was replaced by Mr. Roy C. Osgood, of the First National Bank of Chicago; meanwhile Dr. F. S. Deibler has been replaced in 1936 by Dr. J. W. Bell as Treasurer of the Association and third member of the committee. These facts are cited to show both the caliber of the committee and the essential continuity of its membership. Only between 1935 and 1937 did resignations completely alter its composition, and then the change took place gradually over a three-year period. Since its inception the committee has held periodic meetings and whenever it deemed it necessary or desirable has had analyses made both of the portfolio and of individual securities.

Since 1925 the record of the account falls essentially into two periods. For the first ten years the account was practically a bond fund; only in 1933 were common stocks added and they then comprised only one-ninth the portfolio (at cost). In 1935, however, a balanced fund emerged with a substantial shift from bonds to common stocks, and ever since stocks have exceeded bonds in dollar amount held. Incidentally, it should be observed that the policy has been followed of keeping the account fully invested. Deviations have been minor; for example, in the later twenties the holding of some certificates of deposit (really a continuation of an earlier policy) or in 1937 the holding of cash for several months pending suitable investment opportunities. Other-

¹ Three official sources have been used in preparing this paper: the annual reports of the Auditor, the Finance Committee, and the Treasurer (especially that for 1944).

wise, funds have either been withdrawn or, especially recently, placed in United States governments.

Since the Finance Committee has assumed jurisdiction the growth of the account by and large has reflected reinvestment of earnings rather than provision of new capital. For the fifteen years 1931 through 1945 the growth of \$49,222.28 in principal (at cost) was almost equal to the current income and net capital gains received during the period,² when the custodian's fees of \$1,069.96 are ignored. The trend had already been evident in 1936, when the committee noted that the accessions of \$20,194.50 to the initial fund in 1925 of \$24,661.00 almost equaled the income received of \$20,802.61, which excluded capital gains.

The growth in the account shown in Chart I, Treasurer's Report, 1944, however, has been irregular. The rate of return has varied from year to year; the current yield has declined markedly; and the net realized capital gains (and losses) while rarely large, have followed no regular pattern. More important, in certain years the income has been withdrawn while in others new capital has been provided in addition to reinvestment of that income. In fact, in all but five³ of the twenty years since 1925 the account has increased. On the other hand, only in six of the last fifteen years has new money been invested; in the remaining nine years the principal (at cost) has either decreased (in four years) or has grown less than the current income plus capital gains that year. In other words, in these years income has been withdrawn in part. These shifts in policy reflect changes in investment opportunities as well as the cash needs of the Association and its other revenues. Thus the Finance Committee explained in 1941 that the low return on good bonds and the uncommonly great risk of declining stock prices made the time unpropitious for making new investments, and the Treasurer observed that it therefore seemed less desirable to augment investment holdings than to spend the current income on activities of the Association.

An analysis of the account and its operation is of interest for several reasons:

1. The limited size and specific objectives of the account, which parallel those of conservative individuals seeking both from savings and from investment performance to build up a moderate accumulation and to derive a satisfactory current return.

2. The policies followed and the results achieved during an interesting but difficult period.

It should be noted, however, that unlike the individual the account faces no problem of taxation (and at different rates) on current income and capital gains. On the other hand, the committee does have the responsibility of trusteeship.

I

In its report for 1937 the Finance Committee enunciated most fully the investment principles which it followed. It sought (1) to conserve capital, (2) to obtain reasonable stability of income, and (3) to achieve as high a yield as

² Between one-sixth and one-seventh of the total represented capital gains.

³ Namely, 1928, 1933, 1934, 1941, and 1943. The drop in 1928 and 1941 was purely nominal.

is compatible with the risks that can reasonably be assumed. In the early thirties the committee had already stated that it regarded the account as an investment account and that it did not seek trading profits—the latter a point reiterated by the Treasurer in 1944. In the latter year the Treasurer characterized the securities held as “businessmen’s risks” bearing a good yield.

From the record it is evident that size and stability of income have been predominant in the operation of the account. This is equally true after as before 1935. As to principal, the committee largely though not entirely has taken a defensive approach. In the early thirties, when the account was practically entirely a bond fund the committee stated that it watched for stability of earnings and ability to meet the principal at maturity, selling promptly a security unable to meet these tests. And in 1939 it called attention to the risk of fall in value of the low-yield, high-grade bonds which normally would be used in a fund solely interested in the security of capital. But the committee more recently has not scorned an opportunity on occasion to buy a security promising rapid appreciation. Several senior reorganization rails may be cited, such as St. Paul generals in 1943 and Chicago and Northwestern generals just prior to reorganization in 1944, as well as more marginal rails such as New York Central refunding and improvements in 1945, and United States Gypsum common stock in 1935. In 1935 the committee stated that in view of financial conditions it had decided to realize on bonds reaching the call price. The next year the committee enunciated a policy of buying bonds with a reasonable chance of appreciation or which were expected to move up before the stocks below them were likely to show any great appreciation, while avoiding AAA money rate bonds.

As already noted, since 1935 the account has represented a balanced fund involving both equity and creditor positions. Only in that year, when a wholesale shift occurred from bonds to common stocks, did the committee call attention to its stock purchases; in 1933 no special mention had been made of a switch for the first time of some funds from bonds into three common stocks. In 1935 the goal of 50 per cent bonds and 50 per cent equities was established, a policy which has been maintained more or less as an objective ever since. For the next three years, however, the actual proportion was more nearly one-third bonds and two-thirds stock, but since 1939 it has increased to approximately 40 per cent bonds and 60 per cent stock, part of the latter preferred. At the close of 1941 the committee’s analysis showed holdings (at market) equal to 38.6 per cent bonds, 12.5 per cent preferred and 49.9 per cent common stock,⁴ while at the close of 1945 the respective proportions were 39.0 per cent, 7.8 per cent, and 53.2 per cent.

Diversification has also been evident in other directions. Between 1925 and 1934 the number of issues held ranged from thirteen to twenty-eight, between 1935 and 1945 from twenty-four to thirty-seven. The number has tended to increase as the fund increased in size. Beginning with 1935, in every year the number of common stocks has at least equaled and in about half the years exceeded the number of bond issues. From 1938 on, either

⁴These figures are for a date slightly earlier than that used in preparing the figures in the paragraphs that follow.

three or four preferred issues have been in the portfolio. In 1941 the committee considered selling a security when the commitment (at market) exceeded \$2,800. Stock holdings (at cost) have mostly ranged from about \$1,000 to \$3,000, with no marked concentration, while bond holdings until recent years have been almost equally around \$1,000 and \$2,000. However, policies as to stock and as to bond investments have differed greatly, both as to kind of issue and activity, hence require separate treatment.

From 1925 through 1931 twenty-eight bond issues in all were acquired; after a lull of three years of no purchases at all, thirty-two other issues from 1935 through 1945. In the later twenties chief emphasis was placed on industrials; in the earlier thirties on rails and utilities. Utilities and industrials had both petered out by the opening of the forties, when attention was focused upon rails and to a lesser extent United States governments. In substantial degree, of course, purchases have been due to the necessity of replacing utility and industrial issues that had been called rather than those voluntarily sold.

These changes in direction of purchasing activity find their reflection in the composition of the portfolio. The accompanying table shows bond holdings, by classes, in 1936, 1941, and 1945.

Class	1936		1941		1945	
	Number of Issues	Per Cent of Portfolio (at market)	Number of Issues	Per Cent of Portfolio (at market)	Number of Issues	Per Cent of Portfolio (at market)
Railroad	7	14.3	9	18.8	9	25.3
Public utility	4	11.0	4	13.6		
Industrial	1	1.7	2	3.4		
Foreign government .			1	1.5		
U.S. government ...					3	13.7
Total	12	27.0	16	37.3	12	39.0

The number of bonds of one issue bought appears always to have varied with the funds available and the committee's opinion of the attractiveness of the issue. Usually, only one or two \$1,000 bonds have been bought, but during the last few years from three to five bonds have sometimes been acquired. The largest commitment has been \$8,000 of U. S. Treasury's in 1945, but in that year a single piece of each of two rails was bought, three bonds of another issue, and five of another, while two rail holdings added the year before were each increased from three to five bonds. Maturities have generally been spaced; in 1941, when no governments were held, 2 per cent of the holdings had been or were to be called, 7 per cent matured in one to five years, 10 per cent in five to fifteen years, and only 5 per cent in over thirty years. However, in 1945, when over one-third the bond holdings consisted of United States governments the maturities of the corporate bonds had lengthened appreciably.

Bonds may also be classified by quality. To be sure, ratings are subject to serious limitations, notably their reflection of past performance rather than future prospects. Thus ratings since the mid-thirties have perhaps been unduly depressed, whereas during the preceding decade they had been overly high. The accompanying table shows the Moody ratings of the bonds in the account, by number of issues held, in 1925, 1931, 1933, 1936, 1941, and 1945.

Year	Govern- ment*	Not Rated	Aaa	Aa	A	Baa	Ba	B	Ca	Total
1925	2	1	2	5	3					13
1931	4		4	9	3	7				27
1933	4		1	5	3	6	5	1		25
1936					3	7	2			12
1941	1				1	7	5	1	1	16
1945	3				2	2	4	1		12

* U.S. and other.

It may be observed, too, that in recent years increased emphasis has been placed upon purchase of junior mortgage or debenture bonds instead of senior securities. However, the record has been good; only two defaults have been reported, both in rails—one in 1936, the other in 1938.

Preferred stocks play a minor role in the account. They were first added in 1936 and have never exceeded four in number.⁵ One has been a rail, another a financial issue, and the remainder industrials; all have been high grade. In 1941 the four preferred issues accounted for 12.3 per cent of the portfolio and in 1945 the three issues then held for only 7.8 per cent.

Common stock first appeared in the portfolio in 1933, when three issues were added, but began to play a major role only in 1935. During the eleven-year period beginning in the latter year twenty-one issues were purchased. Whereas rails have bulked largest in the bond portfolio, industrials overshadow all other classes among the common stocks. The accompanying table shows common stock holdings, by classes, in 1936, 1941, and 1945.

Class	1936		1941		1945	
	Number of Issues	Per Cent of Portfolio (at market)	Number of Issues	Per Cent of Portfolio (at market)	Number of Issues	Per Cent of Portfolio (at market)
Railroad	1	2.7	1	1.5	2	1.7
Public utility			1	2.1	2	5.9
Industrial ..	14	69.1	14	46.8	14	45.6
Total	15	71.8	16	50.4	18	53.2

The common stocks have been confined to dividend payers; again, unlike the bonds they may be termed in general junior blue chips. The desire for diversification in a portfolio of such limited size has caused holdings to be chiefly in fifty-share lots; in rare instances, other amounts such as twenty-five or a hundred shares have been acquired instead. The varied prices of individual issues have caused holdings to differ greatly in dollar amount.

Turning to activity of the portfolio, changes from year to year are similar to those shown for investment trusts since 1940 in the annual compilation of Arthur Wiesenberger and Company, although substantially less in amount. The accompanying table shows, beginning with 1931, the annual ratio of purchases and sales (including calls), as well as total transactions to average capital employed during the year, as derived from market value of portfolio at opening and close of the year.

⁵ The small amount of Erie preferred received in reorganization is not considered here. It may be observed in passing that prior to 1925 the Treasurer had already purchased some preferred shares.

Year	Purchases	Sales	Total Transactions
1931	29.6	11.1	40.7
1932			
1933	12.2	13.2	25.4
1934		6.8	6.8
1935	82.3	60.9	143.2
1936	37.4	35.5	72.9
1937	11.5		11.5
1938	5.3	1.9	7.2
1939	9.2	4.2	13.4
1940	7.2	3.4	10.6
1941	3.1	3.5	6.6
1942	11.2	6.6	17.8
1943	8.7	12.3	21.0
1944	23.2	4.4	27.6
1945	24.9	25.3	50.2

Only in the two years 1935 and 1936, in which the portfolio was readjusted to a balanced status, were transactions very heavy. The only other years that should be mentioned, in descending order, are 1945, 1931, 1944, 1933, and 1943. It will be noted that purchases and sales have varied in relative importance.

The over-all figures, however, obscure fundamental differences in activity between bonds and stocks. In the absence of detailed dollar data of market value of holdings the contrast is perhaps most clearly revealed by the accompanying table, which shows the number of issues bought and sold (or called) each year. The figures include cases where an existing holding was either increased or decreased as well as, for bonds, those in which securities received in a railroad reorganization were sold piecemeal.^a

Year	Bonds		Preferred Stock		Common Stock	
	Bought	Sold or Called	Bought	Sold or Called	Bought	Sold
1925	1	3				
1926	2					
1927	4	3				
1928	2	2				
1929	2					
1930	3	1				
1931	9	2				
1932						
1933		3			3	
1934		1				
1935	4	16			13	3
1936	5	5	1		6	2
1937	1		1			
1938	2	1	1			
1939	2	2	1		1	
1940	4	2				
1941	2	1				
1942	4	5			1	
1943	2	4		1		
1944	4	2	1		1	
1945	7	8	1	2		

^aFor these two reasons, these figures do not co-ordinate perfectly with those of changes in the number of issues held.

From 1925 through 1934 twenty-three bonds of fifteen issues were sold or called as compared with seventy-seven and a half bonds of forty-six issues from 1935 through 1945. Utility and industrial bonds have not infrequently been called. In part, sales reflect changes in economic conditions. Thus, as already noted, in 1935 the committee felt that it should realize on bonds nearing their call price and in 1941 it decided in view of the lack of ready replacements for second-grade bonds being called as the market improved, to place the proceeds in United States governments. However, in only two periods—1935-36 and 1945—was turnover so extensive as to represent a change of policy. The former witnessed reduction of bond holdings incident to inauguration of a balanced portfolio; the latter apparently represented preparation for postwar conditions mingled with realization of wartime opportunities for appreciation. Changes in bond holdings have been gradual. Some have been involuntary, some deliberate. Some issues have been held for as little as one year, others over fifteen years, and bond sales within a single year may include those held for shorter as well as longer periods. In other words, the emphasis has been upon the special situation of the individual issue. And, it must be observed, with the types of bonds purchased, some such degree of turnover is to be expected.

Common stock turnover has been very small. The list was not disturbed by sales for the recession of 1937 or again in early war time. Nor were the prospects for individual industries or issues deemed sufficiently changeable to warrant sales, as in the case of bonds. Instead, the policy with respect to common stocks is the reverse of the policy followed in the case of bonds, where lower quality requires more rapid turnover as the situation of the individual issue changes. The common stock policy proceeded on the broadest cyclical lines, for economic activity as a whole, instead of being based on analysis of the varying economic prospects of specific industries and issuers. Only in 1946 was there some change. The sale of part of a chain store holding at a handsome profit reduced a swollen investment to proper size; there was one shift from a heavy to a consumer goods line; and a second shift from one oil company's stock to another's.

A final observation is in order. In introducing common stocks into the portfolio, both in 1933 and in 1935-36 the prices paid were substantially above the lows of the year, although in most cases well below the highs. The same is true when buying some utility bonds and some secondary rail bonds since that time. In other words, the Finance Committee waited for some movement in market price to confirm improvement in underlying outlook before undertaking its commitments.

II

What investment results has it been possible to achieve by following the policies just outlined? Otherwise stated, what is the expectation of performance to which such management can look forward?

A simple though rough over-all test of investment results is afforded by the ratio which the increase or decrease in the market value of the portfolio during the year bears to the invested capital. To ascertain the invested capital,

the market value of the portfolio at the opening of the year is increased by the new money added and reduced by the cash withdrawn during the year. In the calculation the small custodial fees, averaging about \$100 a year during recent years, are ignored. The accompanying table shows the ratio for each year, as well as the cumulative results in terms of a base of 100 for the market value of the portfolio at the end of 1930.

Year	Ratio for Year	Cumulative Relative (end of year)
1931	-0.8	99.2
1932	3.0	102.2
1933	6.0	108.3
1934	11.0	120.2
1935	13.0	135.8
1936	25.8	170.8
1937	-16.5	142.6
1938	10.7	157.9
1939	5.0	165.8
1940	-1.6	163.1
1941	-3.4	157.6
1942	-0.7	156.5
1943	15.0	180.0
1944	23.1	221.6
1945	25.4	277.9

This table permits the following observations:

1. Over the fifteen years the total net gain of 177.9 per cent averaged equaled 8.0 per cent per annum.⁷ However, this result is subject to the qualification that the year 1930, chosen for the base because it was the first year for which adequate figures were available, represents a relatively low point in security prices, just as the year 1945 represents a relatively high level.

2. The wide variation in performance from year to year stands out, and the importance of several good years is evident, both up to 1936 and again up to 1945. Conversely, because of the upset of 1937 followed by the poor years 1940-42, only seven years later—in 1943—did the portfolio exceed the peak that had been reached in 1936.

3. If the average calculation had covered only thirteen years instead of fifteen—through 1943—the total gain of 80 per cent would have represented a yearly return of but 5.6 per cent, whereas 11.6 per cent per annum had already been achieved during the six years 1931-36, inclusive. In the long run, therefore, the performance depends upon the proper timing of security sales—the “cashing in” of substantial paper profits. The extent to which this was done in 1946 will vitally affect the entire record of the account.

4. Since the initial 1925 figure for the fund (at cost) is available, the results for the three periods mentioned above, beginning in 1925, may be compared with those beginning in 1930. The record from 1925 to 1936 was

⁷ When allowance is made for the increased balance in the account each year by using the formula

$$\log P_N = \log P_0 + N [\log (1 + r)]$$

where

P_N is the principal sum at the end of N years

P_0 is the original principal sum

r is the rate of income (interest)

distinctly poorer than that for 1930-36 (8.9 per cent versus 11.6 per cent) and the record from 1925 to 1945 was also less favorable than that from 1930 to 1945 (7.4 per cent versus 8.0 per cent). However, over the period 1925-43 the return was very slightly higher than for the years 1930-43; namely, 5.62 per cent as contrasted with 5.57 per cent.

The over-all test does not judge the account in terms of its professed objectives of conservation of capital and achievement of a stable yet relatively high income. The composite figures obscure the varying trends of the divergent constituents of current investment income, realized capital gains, and changes in unrealized appreciation or depreciation. And one school of investment thought, of course, makes a sharp distinction between the first of these—current income—and the other two—changes in the capital fund employed. The accompanying table, while it makes no allowance for new money added or cash withdrawn, states the dollar amounts of each of the three constituents, together with a yearly total.

In general trend the total corresponds to the results shown in the preceding table. It may be observed that over the fifteen years current investment income equaled 58.8 per cent of total performance; net realized capital gains 10.7 per cent; and the net of the yearly changes in unrealized appreciation or depreciation 30.5 per cent. But, if the last two years be omitted, the respective proportions would be 86.6 per cent, 8.6 per cent, and 4.8 per cent. Realized capital gains, it may be added, account for but little more than two years' current investment income at 1944-45 levels. The importance of current investment income and the evanescent character of unrealized capital appreciation or depreciation cannot be more vividly portrayed.

Year	Interest and Dividends	Net Realized Capital Gains or Losses	Change for Year in Unrealized Appreciation or Depreciation	Total
1931	\$1,886.81	—\$ 321.85	—\$ 7,022.96	—\$ 5,458.00
1932	2,014.36		—1,067.44	946.92
1933	1,789.06	—1,894.00	2,500.27	2,395.33
1934	1,811.20	288.40	5,164.50	7,214.10
1935	1,703.66	—606.30	7,173.05	8,270.41
1936	2,399.40	5,510.47	6,074.96	13,984.83
1937	3,574.49		—17,513.66	—13,939.17
1938	2,991.06	23.74	4,611.09	7,625.89
1939	2,760.31	—207.19	218.13	2,770.25
1940	3,220.02	79.08	—3,455.73	—156.63
1941	3,586.32	144.41	—1,867.78	1,862.95
1942	3,492.66	—201.94	—3,005.75	284.97
1943	3,228.44	594.09	10,113.57	13,936.10
1944	3,403.24	2,018.72	7,960.42	13,382.34
1945	3,968.84	2,161.82	11,834.31	17,964.97

Brief comment may be made on each of the three constituents in turn. Over the fifteen years 1931-45 current investment income equaled just under 5 per cent on cost, ranging from 3.92 per cent in 1935—the year when investment policy was revised to secure a balanced portfolio—to 6.31 per cent in 1937—the year when dividends rose sharply because of the enactment of a federal undistributed profits tax. About half the years show a figure above,

the other half show a figure below the average, but the 1945 return was 4.71 per cent as contrasted with a peak in 1941 of 5.64 per cent, and further decline was anticipated. The rate of return on market value of investments is available only for the last five years. It shows far greater amplitude of fluctuation than does the rate of return on cost; lower security prices enhance the rate while higher prices cause it to fall. The earlier forties showed a steady drop from 6.1 per cent in 1941 to 3.72 per cent in 1945, while as already noted return on cost declined only from 5.64 per cent in 1941 to 4.71 per cent in 1945. Separate rates of return on bonds and stocks, at cost, are available only for the three years 1937-39; the yield on bonds was substantially lower during the first two years and substantially higher in 1939. The relative dollar amounts of interest on bonds and dividends on stock received each year are shown in Chart II in the 1944 Treasurer's Report.

Realized capital gains and losses have been of minor importance. During the ten years 1925-34 there was a net loss of \$1,724.82, resulting from the excess of losses in two years (1931 and 1933) of \$2,215.85 over the gains in six years of \$491.03. Transactions in five issues showed losses while those in ten issues showed gains. All these operations were in bonds, some of which were called. Turning to the eleven years 1935-45, gains of \$10,532.33 in seven years exceeded losses of \$1,015.43 in three years, to show a net gain of \$9,516.90. Over half the profit resulted from the sale of a single stock in 1936, while most of the remainder was realized from bond sales in 1944 and 1945. During this eleven-year period thirty-six bond issues were sold or called at a profit and ten at a loss, while a gain was realized on three preferred stocks and a loss on four out of six common stocks.

The wide and sudden swings from year to year in unrealized appreciation or depreciation are evident from the table and from Chart I. The account was "under water" during four of the five years 1930-34; the range was from appreciation of \$195.92 in 1930 to depreciation of \$7,894.78 in 1932, reflecting the changing fortunes of medium grade bonds. During the eleven years 1935-45 the account was "above water" in seven and "under water" in four years, the range being from depreciation of \$7,995.30 in 1942 to appreciation of \$21,913.00 in 1945. Large appreciation during 1935 and 1936 was followed by a sharp drop in 1937. After remaining on an even keel in 1938 and 1939, the drop in 1940, 1941, and 1942 was followed by a rapid rise in 1943, 1944, and 1945 that attained huge proportions. The gyrations since 1935 reflect in part during the earlier years recovery in bond prices but chiefly throughout common stock price movements.

What conclusions can be drawn from this analysis? In contrast to the relative stability of current income stands the variability of realized and, far more important, unrealized capital gains. To achieve the one implies, of necessity, that the others will vary. Conservation of capital cannot be conceived of in terms of year-to-year or other short-run periods. Unrealized capital gains and losses are evanescent, and so too are reinvested realized capital gains. During a boom, paper profits accumulate; during a slump they evaporate and may turn into sharp paper losses. The test is rather the extent

to which the paper profits near the peak of the boom are realized and retained in cash or placed in a form subject to relatively minor shrinkage. In the adverse market of 1937, it may be observed, the Finance Committee noted that its portfolio showed a lesser decline than the market averages, although the shrinkage was substantial and the portfolio could hardly be termed a defensive one. The results of the year 1946 will be decisive in determining whether this is done or whether they slip away again as did the recovery profits of 1933-36 in 1937.

REPORT OF THE AUDITOR

December 31, 1946

*Executive Committee,
American Economic Association,
Evanston, Illinois.*

DEAR SIRs:

In accordance with instructions we have examined the accounts and related records of the American Economic Association for the period December 12, 1945, to December 7, 1946, and now submit our report thereon together with the following exhibits:

Balance Sheet—December 7, 1946	Exhibit 1
Statement of Income and Expenses for the period December 12, 1945, to December 7, 1946	Exhibit 2

Results from Operations

Net income for the period December 12, 1945, to December 7, 1946, was \$2,873 compared with net loss for the fiscal year ended December 11, 1945, of \$2,584 as shown in the following summary:

<i>Particulars</i>	Year Ended Dec. 11, 1945	Dec. 12, 1945 to Dec. 7, 1946	Increase Decrease
Income:			
Dues	\$20,260	\$22,076	\$1,816
Interest and dividends	3,862	3,547	315
Profit on sales of securities	2,162	4,187	2,025
Total income	\$26,284	\$29,810	\$3,526
Expenses:			
Administrative and other operating expenses	\$ 9,642	\$11,224	\$1,582
Publication expenses	22,890	28,857	5,967
Publication income	11,164	14,144	2,980
Total expenses	\$21,368	\$25,937	\$4,569
Net operating income	\$ 4,916	\$ 3,873	\$1,043
Appropriations for special committees	7,500	1,000	6,500
Net income or loss	\$ 2,584	\$ 2,873	\$5,457

The increase in dues reflects the increase in membership during the period under review, as reported by the Secretary:

Classification	Number of members	
	Dec. 11, 1945	Dec. 7, 1946
Regular	3,971	4,376
Junior	64	153
Family	56	68
Life	31	31
Honorary	15	13
Complimentary	17	21
Totals	4,154	4,662

Interest on bonds owned was accounted for in accordance with stated rates; dividends received on stocks were compared with amounts reported in published records of dividends paid. Computation of the \$4,187 gain on securities sold is shown below:

	Cost	Sales Price	Gain
Bonds	\$ 6,018	\$ 7,013	\$ 995
Stocks	6,151	9,343	3,192
Totals	<u>\$12,169</u>	<u>\$16,356</u>	<u>\$ 4,187</u>

Net publication expense, as shown in the following summary, amounted to \$14,713 for the current period compared with \$11,726 for the preceding fiscal year.

Expenses:	Particulars	Period Ended Dec. 12, 1945	Period Ended Dec. 7, 1946	Budgetary estimates for calendar year 1946
Printing of—				
<i>Review</i>		\$10,588	\$10,968	\$10,000
<i>Proceedings</i>		4,503	10,185	—
Editor's honorarium		2,500	2,344	2,500
Payments to contributors		1,668	1,590	1,600
Editorial clerical salaries		3,300	3,088	3,300
Editorial supplies and expenses		280	661	250
Sundry publication expenses		51	21	
Total expenses		<u>\$22,890</u>	<u>\$28,857</u>	
Less—Income:				
Subscriptions, other than members		\$ 8,456	\$10,082	
Sales of copies		1,056	1,264	
Advertising		1,652	2,798	
Total income		<u>\$11,164</u>	<u>\$14,144</u>	
Net publication expense		<u>\$11,726</u>	<u>\$14,713</u>	

The December, 1946, issue of the *Review* had not been printed at the time of our examination. The publishers of the *Review* have estimated \$3,150 to be the expense of printing 7,300 issues (and reprints) and this figure is included in the costs above.

Changes during the period ended December 7, 1946, in Committee Funds Appropriated (not expended) are analyzed below:

Fund	Unexpended Balance Dec. 11, 1945	Appropriation or Expenses During Period	Unexpended Balance Dec. 7, 1946
Committee on Contemporary Development of Economic Thinking and Information	\$5,000.00	\$ —	\$5,000.00
Committee on Research	1,176.50	238.17	938.33
Committee on Undergraduate Teaching of Economics and Training of Economists...	600.00	1,000.00 200.00 }	1,400.00
Totals	<u>\$6,776.50</u>	<u>\$ 561.83</u>	<u>\$7,338.33</u>

Financial Condition

Condensed balance sheets of the Association at December 11, 1945, and December 7, 1946, are compared below:

Assets	Dec. 11, 1945	Dec. 7, 1946	Increase Decrease
Cash on deposit and on hand	\$ 4,510	\$ 5,602	\$ 1,092
Receivables, net	1,201	2,015	814
Inventory of "Economic Essays"—at nominal value	1	1	—
Prepaid expenses	344	1,348	1,004
Furniture and fixtures, net	437	570	133
Investments at cost—			
Bonds	36,706	37,964	1,258
Stocks	44,956	47,423	2,467
	<u>\$88,155</u>	<u>\$94,923</u>	<u>\$ 6,768</u>
Liabilities			
Accounts payable	\$ 3,904	\$ 3,621	\$ 283
Allied Social Science Associations	829	829	—
Income tax withheld from employees	121	84	37
Deferred income	5,166	8,976	3,810
Membership extension fund	1,558	1,402	156
Fund for proposed secretariat	35	35	—
Committee funds appropriated (not expended)... ..	6,777	7,338	561
Life memberships	3,750	3,750	—
Surplus—			
Balance at beginning of period	68,349	66,015	2,334
Net income or loss for period	2,584	2,873	5,457
Transfers from life memberships	250	—	250
	<u>\$88,155</u>	<u>\$94,923</u>	<u>\$ 6,768</u>

Cash on deposit was satisfactorily reconciled with balances confirmed directly to us by the depositories.

The receivables of the Association were not confirmed by correspondence with debtors. Based upon the Association's past experience, the reserve for doubtful accounts appears to be adequate to cover normal losses.

Changes in the investment accounts were vouched by examination of broker's invoices and other supporting data. Securities held were confirmed directly to us by the State Bank and Trust Company of Evanston, Illinois, custodian for the Association.

Insofar as we were able to ascertain, all liabilities of the Association at December 7, 1946, are reflected in the accompanying balance sheet and the Secretary has represented to us that to the best of his knowledge all liabilities are disclosed.

We wish to take this opportunity to express our appreciation of the courtesies and co-operation extended to our representatives during the course of the examination.

Very truly yours,

DAVID HIMMELBLAU & Co.
Certified Public Accountants

EXHIBIT 1

AMERICAN ECONOMIC ASSOCIATION
BALANCE SHEET—DECEMBER 7, 1946*Assets*

CURRENT ASSETS:

Cash on deposit and on hand—

State Bank and Trust Company, Evanston	\$ 1,774.57	
National Bank of Commerce of Chicago	3,802.38	
Petty cash	25.00	\$ 5,601.95

Receivables—

Review advertising	\$ 994.99	
Interest accrued on bonds	544.29	
Publication sales	356.69	
Membership dues	243.50	
Sundry	33.25	

Total receivables	\$ 2,172.72	
Less—Reserve for doubtful accounts	157.42	2,015.30

Inventory of "Economic Essays"—at nominal value		1.00
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Total current assets		\$ 7,618.25
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PREPAID EXPENSES:

Unexpired insurance	\$ 451.97	
Prepaid salaries	495.85	
Inventory of stamps and envelopes	400.66	1,348.48

INVESTMENTS AT COST:

Bonds	\$37,964.08	
Stocks	47,422.89	85,386.97

FURNITURE AND FIXTURES (less reserve for depreciation)		569.79
--	--	--------

\$94,923.49*Liabilities, Funds and Surplus*

CURRENT LIABILITIES:

Accounts payable	\$ 3,621.12	
Allied Social Science Associations	829.44	
Income taxes withheld from employees	83.80	\$ 4,534.36

DEFERRED INCOME:

Prepaid subscriptions	\$ 4,591.97	
Prepaid dues	4,384.25	8,976.22

MEMBERSHIP EXTENSION FUND

1,401.71

FUND FOR PROPOSED PERMANENT SECRETARIAT

35.00

COMMITTEE FUNDS APPROPRIATED (not expended)

7,338.33

LIFE MEMBERSHIPS AND SURPLUS:

Life memberships	\$ 3,750.00	
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Unappropriated Surplus—

Balance December 11, 1945	\$66,014.51	
Net income for period December 12, 1945 to December 7, 1946 (Exhibit 2)	2,873.36	68,887.87

\$94,923.49

AMERICAN ECONOMIC ASSOCIATION

EXHIBIT 2

AMERICAN ECONOMIC ASSOCIATION
STATEMENT OF INCOME AND EXPENSES

FOR THE PERIOD DECEMBER 12, 1945, TO DECEMBER 7, 1946

Particulars		Amount	
INCOME:			
Dues—			
Regular, junior and family members		\$21,796.13	
Subscribing and contributing members		280.00	\$22,076.13
Investments—			
Interest and dividends:			
Interest on bonds	\$ 1,213.65		
Dividends	2,441.13		
	\$ 3,654.78		
Less—Custodian fees	107.90	\$ 3,546.88	
Gain on sale of securities:			
Bonds	\$ 995.00		
Stocks	3,191.63	4,186.63	7,733.51
Total income			\$29,809.64
EXPENSES:			
Administrative and other operating expenses—			
Secretary's salary	\$ 1,976.50		
Office salaries	4,912.46		
Annual meeting (net)	1,091.96		
Executive Committee expenses	1,026.63		
Other committee expenses	572.73		
Postage expense	479.24		
Stationery and supplies	487.72		
Insurance expense	96.83		
Provision for depreciation	86.88		
Telephone and telegraph	84.15		
American Council of Learned Societies—dues...	75.00		
Exchange on checks	49.71		
Miscellaneous—net	283.82	\$11,223.63	
Publication expenses—			
Printing of:			
Review	\$10,968.00		
Proceedings	10,185.61		
Editor's honorarium	2,343.74		
Payments to contributors	1,590.55		
Editorial clerical salaries	3,087.70		
Editorial supplies and expenses	660.66		
Sundry publishing expense	20.98		
Total publication expenses	\$28,857.24		
Less—Publication income:			
Subscriptions, other than members	\$10,082.35		
Sales of copies	1,264.51		
Advertising	2,797.73	14,144.59	14,712.65
Total expenses			25,936.28
Net operating income			
\$ 3,873.36			
DEDUCT—ADDITIONAL APPROPRIATION FOR COMMITTEE ON UNDERGRADUATE TEACHING OF ECONOMICS AND TRAIN- ING OF ECONOMISTS			
1,000.00			
Net income (Exhibit 1)			
\$ 2,873.36			

REPORT OF THE MANAGING EDITOR FOR THE YEAR ENDING DECEMBER, 1946

In September, 1946, the Editorial Office of the *Review* was returned to Ithaca, New York, after more than five years in Washington, D.C. In spite of wartime conditions and the preoccupations of the Managing Editor, the *Review* maintained itself in a healthy condition throughout the war. Editorial obligations are, however, increasing and it is expected that the return to the academic environment will permit more fully adequate attention to them than has been possible in recent years.

Miss Mary Connally resigned as Assistant to the Managing Editor in the spring of 1946, but continued to discharge the duties on a part-time basis until midsummer. I should be most lacking in gratitude if I failed to record the competency with which Miss Connally discharged her duties and the completeness of her assumption of responsibility for the detailed operation of the office. It was this relief from routine duties which made it possible for me to continue to discharge the editorial duties during the war. As of August 1, 1946, Miss Doris Merriam, a thoroughly competent and adequate successor, was appointed to this position.

The past year has seen a moderate increase in the incoming flow of manuscripts and, I should say, some improvement in the quality and general interest of the *Review*. The flow of satisfactory manuscript is, however, still rather small.

It is my experience that useful economic writing can be "induced" by editorial suggestion. To carry this practice very far would, of course, violate the traditional function of the *Review* of providing a publication outlet for the membership at large of the Association. Moreover, the kind of editorial planning which would be required in so broad and complex a field as economics to bring out the needed contributions from the best sources, and the amount of study and correspondence connected therewith, are quite out of the question so long as the editorship represents duties superimposed upon an otherwise full load of academic duties.

I do not wish at this time to make any recommendations on the subject. My constant preoccupation with the flow of periodical economic literature, in the *Review* and elsewhere, has, however, induced certain reflections which I am disposed to air. Authorship is now on an almost wholly *laissez faire* basis. Generally speaking, this basis has not in the past been questioned. It is, however, my impression that it leads to the grave neglect of many topics, in the fields of theory, practice, and policy. Important subjects are neglected. The instruction of economists generally in developments in various fields of expert knowledge and thought is not adequately done. Subjects worthy of cumulative treatment elicit only casual articles. Events calling for timely analysis may get no attention in professional journals and be left to the devices of popular journalism.

The situation to which I call attention is, of course, much broader than the problem of the *Review*. A more positive editorial policy could assuredly improve the *Review*, but a journal serving the present primary purpose of the *Review* is needed. There is, however, a loss of over-all effectiveness in having several journals waiting hopefully for the arrival of manuscript fit to print

while no one does much of anything about persuading into print the things that need to be printed. As matters now stand, the pamphlet-size writings are in an equally unsatisfactory situation, covering even more poorly the fields in which they might be useful.

Any great improvement in the situation would presumably be costly and not self-supporting, and would require a large amount of editorial attention. Whether the American Economic Association should concern itself with improvement in the situation I leave to the further consideration of the Executive Committee.

Among the present obligations of the *Review* is that of effecting satisfactory intercourse with foreign economists and giving appropriate attention to the economic literature of other countries. Several steps are in process of being taken. A primary one is that of establishing correspondents in a number of countries who will keep the *Review* informed of current writings and assure the flow of books of international interest for purposes of bibliographical listing and review. Another is to restore the exchange list of foreign periodicals and another to arrange for the *Review* to go to those persons and libraries where it would be of the most use.

With respect to the last of these points there is a problem the solution of which I am not clear. Due to exchange restrictions there are many persons and institutions who find it impossible to subscribe for the *Review*. Temporary measures should be found to remove this difficulty. But beyond this difficulty, the *Review* has never had the international circulation which it ought to have, and special measures would be justified to change this situation. The Executive Committee should, I think, authorize the free distribution of a limited number of copies to individuals and libraries, especially the latter. A proposal on this point will be separately transmitted to the Executive Committee. The primary problem is that of making up the list of recipients.

For the purpose of keeping the readers of the *Review* informed concerning the important contributions to thought in other countries, it has already been possible to publish select bibliographies of wartime publications in some countries and to assign reviews of important books, and this service will be extended to other countries. I am in process of building up a list of potential reviewers with knowledge of the less well-known languages, especially the Dutch, Scandinavian, and Russian. It is my general purpose to increase the international coverage of the *Review* and in every way possible to promote international intercourse among economists.

A statistical summary of the contents of the *Review* in 1946, with corresponding figures for 1945, is presented below, exclusive of the *Proceedings*:

	1946		1945	
	Number	Pages	Number	Pages
Leading articles	28	518	26	454
Communications	28	113	36	170
Book reviews	92	202	125	245
Memorials	4	9	5	14
Classified list of new books		49		73
Classified list of periodical articles		23		48
Classified list of dissertations		15		13
Notes		51		41
		980		1,058

The articles, communications, and book reviews were contributed by 131 persons, as compared with 159 in 1945.

The table below presents the actual expenditures in 1946 in comparison with the estimated budget and with actual expenditures in 1945:

	<i>Budget 1946</i>	<i>Actual 1946</i>	<i>Actual 1945</i>
Printing and mailing	\$10,000.00	\$11,223.91	\$10,167.64
Editorial	2,500.00	2,500.00	2,500.00
Clerical	3,300.00	3,240.20	3,300.00
Supplies	250.00	420.24	200.72
Contributors	1,600.00	1,590.55	1,668.50
Contingency	100.00		
	<u>\$17,750.00</u>	<u>\$18,974.90</u>	<u>\$17,836.86</u>

The budget for 1946 was based upon an assumed size of 1,000 pages of printed matter (excluding advertising and index), an issue of 6,600 copies per number, and 1945 printing costs. The actual size of the magazine was only 980 pages, but in spite of this fact the production cost exceeded the estimate by approximately \$1,200. This was due in part to an increase in the number of copies printed, which rose to 6,700 in March and June, to 7,000 in September, and 7,300 in December, or an average of 6,925 per issue. This is an average increase per issue of 1,000 over 1944 and of 500 over 1945.

The principal reason for the excess of actual over estimated cost was the renegotiation of the production contract which raised the printing costs substantially for the September and December numbers.

The trend in cost may be seen in the following quarterly figures for 1946:

	<i>Copies Printed</i>	<i>Pages</i>		<i>Cost*</i>
		<i>Net</i>	<i>Gross</i>	
March	6,700	231	264	\$2,353.54
June	6,700	263	292	2,652.13
September	7,000	265	296	3,128.86
December	7,300	221	268	3,089.38

* Stencils excluded; December reprints estimated.

Costs other than production costs were in the aggregate almost exactly equal to budget estimates.

On the basis of a volume of 1,000 pages (excluding advertising pages) and the present level of copies printed and giving effect to the new level of costs, I recommend the following budget for 1947:

Printing (paper, postage, reprints, etc.)	\$13,500
Editor's salary	2,500
Editorial assistance	3,800
Supplies	350
Contributors	1,600
	<u>\$21,750</u>

This budget is \$4,000 above the 1946 budget and \$2,775 above actual 1946 outlay. Except for \$500, the proposed increase is due entirely to the increased cost of printing and increased circulation, as noted above. The remaining \$500 is designed to cover an increase of \$300 in the salary of the assistant to the editor, recommended to the Executive Committee in a separate document, and

an amount of \$200 for added stenographic and bibliographical aid due to an increased volume of correspondence and receipt of foreign literature.

During the past year I have made some investigations of improvement of the format of the *Review*. Alternative formats will be presented to the Executive Committee visually as a basis for discussion. Thereafter cost estimates will be secured for presentation; if possible, at the spring meeting of the Committee. Further progress on this point would have been reported at this time except that the printers are not able with existing equipment to consider certain desirable formats and have not therefore presented cost estimates as requested.

During the year, the Board of Editors has consisted of N. S. Buchanan, P. A. Samuelson, K. E. Boulding, P. T. Ellsworth, B. U. Ratchford, and L. H. Seltzer. The terms of the two first named have expired, requiring successors to be chosen by the Executive Committee. To all members of the Board I must express my constant gratitude for the assistance which they give in screening manuscripts and for their counsel in other respects.

Respectfully submitted,

PAUL T. HOMAN, *Managing Editor*

REPORT OF THE GENERAL COMMITTEE ON REPUBLICATIONS

During the course of the past year a third volume has appeared in the series of republished articles under the Association's contract with the Blakiston Company of Philadelphia, *Readings in the Theory of Income Distribution*, edited by William Fellner and Bernard F. Haley. The two earlier volumes are *Readings in the Control of Industry*, edited by Joel Dean and Edgar M. Hoover, Jr., published in 1942, and *Readings in Business Cycle Theory*, edited by Gottfried Haberler and others, published in 1944.

A fourth volume devoted to international trade and finance, edited by Howard S. Ellis and Lloyd A. Metzler, is now in process. The selection of articles has been carried through the preliminary stages and a classified bibliography, which proved to be a valuable part of the preceding volumes, has been compiled by the editors, assisted by Norman S. Buchanan, Albert O. Hirschman, and J. M. Letiche on the foreign journals. Presumably this collection will be published during the present calendar year.

The committee has selected as the topic for the next subsequent compilation the theory of prices, and an editorial committee will shortly be announced. It remains to be determined through negotiation with the Blakiston Company as to whether this collection will be embraced in one or two volumes.

With the publication of this last number, the Association's contract with the Blakiston Company, entered into in December, 1940, for five such collections, will have been fulfilled and the question will arise as to whether the Association and the publisher will desire to enter into a similar contract for the future. In order to test the interest of the Association in these volumes, and in order also to base its future recommendations as to subject matter upon tangible evidence, the committee is conducting a canvass of the membership by means of a questionnaire distributed to those attending the 59th annual meeting. This canvass will probably be completed by mailing the questionnaire to members not attending this meeting. Meanwhile Professor Machlup has expressed his willingness to explore the attitude of the publishing firm toward entering again into a contract with the Association for another series of five volumes. The Executive Committee should indicate its wishes in this respect and should be prepared to consider the renewal of the contract at its midyear meeting.

HOWARD S. ELLIS, *Chairman*
KARL L. ANDERSON
JAMES WASHINGTON BELL

REPORT OF THE COMMITTEE ON RESEARCH

Over a year ago the Committee on Research addressed to the members of the Association a questionnaire to determine what was the state of mind of the Association on the subject of economic research. Instead of asking a few people a series of questions the whole Association was given an opportunity to reply. It was the hope of the Committee that this procedure might awaken greater interest in research, might bring forth valuable as well as novel suggestions, and might enable the Committee to help individuals who cared to disclose problems or handicaps to their labors.

Three hundred six replies were received. Several answers were given to many questions. The smallest number of people responding to any one question was 123. It is interesting that 82 people ventured suggestions as to sources which might be tapped to provide research funds. Thirteen of these suggested financial aid by government agencies. The committee promised to keep this information confidential and in order to comply fully with this representation, we will treat this information as secret, defined according to Webster rather than recent government practice. In further confidence it may be added that it is doubtful if the information supplied by members of the Association will yield large grants, the replies in general being quite vague or sources of common knowledge. Not a few of the potential donors have already financed research projects sponsored by members of the Association.

Question 1 asked, "What problem, or problems, in economics do you most desire to investigate?" Two hundred seventy-one people answered this question. Forty-one wanted to work in *monetary and fiscal policy*; 29 preferred the field of *prices*; 15 indicated *taxation*; 14 preferred *planning*; 10 specified *transportation*. *Regional opportunities* attracted 9. *Monopoly problems* interested but 7. *Technological change* was suggested by 5. Single topics not reducible to group classification were noted by 62, while several of the conventional rubrics similar to the designation of fields in the *Review* or in the *Directory* were also indicated in a number of replies. It may be worth calling attention to the absence of replies to this question suggesting a desire to investigate the doctrine of rent, social security, supply and demand, or value theory.

Aside from the first question, more individuals were interested in telling of the gaps in current research than in answering other questions. These gaps were sought under the second question. The greatest gaps were thought to be in the field of *prices*. Twenty people registered this opinion. Seventeen indicated *planning* and *taxation*. Fifteen voted for *technological change*, 11 for *monopoly* and 9 for *money* and *public finance* as gaps to be filled by research to advance the frontiers of economics. Six suggested the study of specific industries. Only 1 person was interested in the subject of *population* and only 1 in the *conservation of resources*.

The most unsettled problems in economics—the subject matter of Question 3—were thought to be in *monetary and fiscal policy*, in *planning*, in *prices* and *monopoly*. The concentration of interest in these topics was marked. The unsettled problems in the *value theory*, in the *theory of saving* and in *taxation*

attracted only 8 or 9 persons. No one mentioned *rent* as an unsettled problem nor *supply and demand*.

Question 4 called for an indication of the shortcomings of current procedures in economic research. Two hundred fifteen indicated something was wrong. The following tabulation indicates the state of opinion on this point as of a year ago:

Failure to consider human element	33
Cannot be understood by average persons	28
Too much statistics	27
Inability to obtain correct data	27
Lack of scientific method	27
Lack of co-ordination of research	26
Lack of co-operation with other social sciences	13
Careless work	13
Too much bias	12
Too narrow and specialized	11
Too little attention to fundamentals	7
Too little statistics	7
Wrong government policy	5
Lack of funds	5
Too little thinking	5
Too much guidance	4
Need new definition of terms	3
Need standards for researchers	2
Miscellaneous answers	52

The next question, aimed at the correction of these shortcomings, solicited information on improvements in methodology or new techniques, to be applied to economic research. Better use of sampling and of statistics was suggested by 43; collaboration with other sciences was recommended by 42; more case studies and direct contacts were proposed by 31. The need for economic abstracts was mentioned by 21; clearer thinking was advocated by 18; co-ordination of research by 16; a simple statement of results by 13; and access to business data by a like number. Six suggested "less bias," and better organization of data. Two wanted increased rewards for research. Two wanted to stop the printing of opinions (and polls) of economists. Thirty had opinions not lending themselves to group classification.

The areas in economics, other than those now being utilized, which offered the greatest opportunity for successful measurement were thought to be *prices*, *money and public finance*, *social security*, *supply and demand*, *rent*, *statistics*, and *value theory*. This question (6) was answered by only 123 persons.

The areas in economics marked for the greatest consensus within the profession were *money*, *public finance*, *monopoly*, *prices*, *production*, and *taxation*.

The areas noted for disagreements among economists were *money and fiscal policy*—an opinion held by almost three-fourths or 114 of those who replied. About half as many voted for *planning* as an area of disagreement. Nineteen indicated disagreements within the field of taxation. In this connection it should be added that there was a concentration of answers indicating preference for fields of research, gaps of knowledge, unsettled problems, shortcomings, agreements and disagreements, as well as opportunities for the refinement of measurements in the fields of money, prices, public finance, and

planning. In short, these fields seemed to have everything and "be all things" to the bulk of our respondents.

The concepts in need of clearer definition or reformulation (Question 9) seemed to show greater discrimination than other replies. At least the concentration of replies was less marked. The concepts indicated have been tabulated as follows:

Full employment	22
Profit	19
Value	17
Free enterprise	17
National income	17
Capital, capitalism	16
Monopoly	14
Savings, investment	12
Wages	12
Cost	12
Inflation	12
Interest	11
Money and credit	11
Planning	10
Taxation	10
Income	10
Competition	8
Price	8
Functions of government	7
Demand and supply	7
Distribution	5
Business cycles	5
Socialism	5
Rent	5
International trade	4
Consumption and production	4
Standard of living	4
Utility	4
Public utilities	3
Labor	3
Market	3
Private enterprise	3
Welfare concepts	3
Optimum population	2
Economic stability	2
Marginal production	2
Commodity	2
Wealth	2
Economic progress	2
Equilibrium	2
Economic law	2
Miscellaneous	81

Under the tenth question the committee asked the members of the Association to indicate the research problems in their own lines of work which could be expanded or promoted by the Association. A tabulation of replies by fields of interest would hardly be significant for discussion. A sample of the answers is therefore given. No attempt is made to cumulate the replies in any one field, nor to list areas of interest, such as were indicated by single words—as for example, "productivity," "technology," or "savings." Emphasis in this summary has rather been on more specific suggestions. The list, while long,

seems to be of sufficient interest to warrant reproduction *in extenso*, though it by no means includes all of the replies.

Some of the problems on which economists would welcome assistance by the Association are as follows:

- Relation between capital and national income
- Theory of capital and interest
- Interest rates (or financial charges) on consumer credit
- Study of variation between industries in distribution of gross value added among factor of production and forces determining these variations
- How the establishment of a particular plant or business in a given locality would affect the people working in the firm and those who handle or use its product
- Promotion of census taking which will give an adequate description of farm organization
- Food consumption—development of systematic body of factual information
- Economics of preservation of soil fertility
- Methods of fostering and controlling the development of natural resources
- Income—elasticity of demand
- Preparation for publication of the great unorganized mass of information on prices, pricing practices, price-making forces, etc., available within OPA
- Profit rate distortions: its consequences, means to prevent them
- Determination of price in a given market under varying conditions
- Problem of industrial price rigidity
- Analysis and justification of lend-lease and reciprocal settlement of accounts between U.S. and Great Britain and the role of the sterling bloc
- International aspects of recent Chinese currency stabilization
- Effects of foreign investment on borrowing and lending country
- International trade cycle—statistical verification of the Beveridge thesis in *Full Employment*
- What minimum proportion of U.S. foreign trade (in value) must be imports during the next decade in order to make possible a growing foreign trade (without artificial stimulus by temporary loans)
- Evaluating and comparing programs to utilize regional resources and to overcome regional difficulties
- Planning vs. private enterprises or socialism
- Significance of freedom as one of several instruments of public policy
- Results of price control in the U.S.
- Drawing a reasonable line between the planned and unplanned areas, in the atomic age
- Incidence in taxation
- Sources of additional local revenues
- Tax treatment for publicly-owned property and operations
- Ultimate origins and destinations of Pullman and airline passenger traffic
- Air cargo

The interrelationship of the organization of industry and the development and application of invention in (a) the metallurgical industries, (b) the heavy chemical industries, and (c) the transportation equipment industries

Industrial economies of particular enterprises

Factors governing the formation and dissolution of enterprises

Government-owned pipe lines—what should be done with them

Studies of individual industries—analyses of specific cost structures, specific labor relation problems, specific marketing problems

Study of consumer co-operatives

Inventories and the short-term cycle

International business cycles

Impact of psychology on economics

Connection between experimental psychology and economic theory

Influence of economic institutions upon personality formation

State interventionism as a historical study

Make a thorough investigation of the nature and extent of historical records and statistics which might be useful for economic theory and policy

The experience of war production—lucid combination of facts and theory

How to get figures for the really important units of modern technology—not political states like Luxembourg, but DuPont, I. G. Farben

Need for more, and more discriminating wage, income, and mobility data

Meaningful local area data on employment

Wage earners' opinions on economic issues

Field studies—calling on factory workers and getting their opinions on economic questions

Restatement of wage theory

Measurement of differences in economic effectiveness of men of varied qualifications and relation of these differences to the right distribution of incomes

Fundamental study of what really happened in industry and employment, 1933-45

Economics of labor and social security legislation

Relation of industrialization of South and West to high level employment

Measurement of regional productivity of labor for purposes of comparison

Effect of the length of the working day on man-hour output

Analysis of demand for labor

Patterns of employment and earnings

Technological change, as affecting employment and living standards

Maintaining full employment through encouragement of low-price policies

Principles of labor arbitration

Domestic labor relations

Economic effects of collective bargaining

Union democracy

Sampling methods for obtaining reliable agricultural data and information

Difficulty of getting precise data about local taxes

Collection of income payments by small marketing areas

Revenue variation of the central budget as a compensatory device
Forecasting national budgets
Role of public finance and fiscal policy in economic expansion
Factual investigation of the problem of social insurance and social security
—show the difference in U.S. and other countries
Industrial injuries
Federalization of unemployment insurance
Economic implications of experience rating in unemployment insurance
Investigation of the structure and operations of the American capital markets
Interrelation of balance of payments and national income
Dynamic aspects of savings-investment balance
Role of gold in the postwar world
Qualitative vs. quantitative credit control
Nature of bank credit
Relation of banking to business fluctuations since 1918
Study of relationships such as demand functions, cost functions, investment response to profits (or other variables), consumption response to income, etc.
Economic policies of foreign countries
Development of technique for presenting essential economics of labor-management problem at high school or immediate post-high school level to persons ultimately active in the unions
Problems of labor market measures, terminology, and statistics
Survey and conceptual analysis of ideas of generic, terminal, and instrumental value among economists
Relation of mathematics and measurement to monetary and price theory
Relation of accounting and economic concepts
The case method and problem materials in the teaching of social science subjects
Use of statistical method for demand studies
A really good production index
Theory and analysis of population growth
Application of statistical methods to price analysis and forecasting of commodity price trends
Exploration of possibilities of systematic theory of socioeconomic comparative morphology
Analysis of rates of economic development
Extent of oligopoly in American economy
Changing ideas on surplus wealth in economic thought
Local research, in cities like Decatur, Illinois
Economic thoughts of Sun Yat-sen
The future of Italian economy
Research in Latin-American economic problems
How to measure social performance of business?
Study of the structural shifts in mineral industries of Western Hemisphere since 1929

The acquisitive nature of man and his abysmal ignorance
Role of Webb-Pomerene Act in future
Practical and realistic appraisal of the Soviet economy
Closer relations between professional economist and practical businessman
Difficulties of co-ordinating work within the framework of neoclassical
normative analysis and dynamic theories of employment
Economic intelligence of foreign nations
Promote readable summaries of the innumerable and voluminous hearings
of Congress
Encouraging further attention to the concrete results of transport and
utility regulation
Economic resources available for the improvement of living in the South,
specifically the southern mountain region
Publication of summaries of economic research by all government and
private agencies, similar to book reviews

Lack of time and money were indicated as the greatest obstacles to research. Lack of assistance ranked third. Absence of basic data or defective data handicapped 26; lack of co-operation in obtaining data was an obstacle to 14; lack of co-operation with other researchers was complained of by 12. Personal limitations were indicated by 16.

Educational institutions as employers must take responsibility for failure to supply adequate research funds and the time for the doing of research. That research facilities are inadequate colleges and universities must also face. Nine of our members registered complaint even as to access to libraries. Eight indicated specifically little appreciation of research. Indirectly even less appreciation was indicated by low pay, high teaching loads, lack of assistance, and poor working conditions. Fifteen economists asked for help in reducing teaching loads so they can do research. The lack of publishing opportunities was mentioned by several, but on this point it can be said that the American Economic Association has given and will continue to give aid. Our *Review* and monograph series should be remembered by all who feel this lack. The Board of Editors of the *Review* can help locate publishers and the Research Committee will also assist when asked. How our profession, and other learned societies, can help improve the financial position and working conditions for teachers, so as to permit more opportunity for research, is deserving of consideration. It may not be amiss to bring home to college administrators that the standing of their schools as educational institutions is directly reflected in the research opportunities and output of their staffs. Faculty research is not a luxury but is part and parcel of the educational process. Economists who are stranded in institutions where research is impossible should be helped by the Association to locate elsewhere. Our placement services should not be forgotten.

Those who indicated ways in which the Association could help promote research thought that we might act as a clearing house and also stimulate more discussion of research topics. Future program committees should know that this was the opinion of one-fifth of those who answered this question.

Twenty-four asked for aid in making more economic data available. They should be heartened by the work of the Committee on Research in stimulating the collection and preservation of records in several wartime agencies and in the program at this convention. Fifteen urged the Association to make more research grants and to build a research fund; 6 others wanted aid in getting financial assistance, 5 wanted help in getting personal assistance. Seven wanted us to help get research support from business and labor leaders. In one form or another, financial assistance would be welcomed by our membership. Perhaps the Association should consider trying to get one of the foundations to make grants for Association-sponsored research. Perhaps the Association should also expand its monograph series so as to provide publication facilities to more people for studies too large to be accommodated in the *Review*.

Finally, the Committee on Research desires to thank all who replied to its questionnaire. It is our hope that we may be able to give further impetus to research by members of the Association and help correct the conditions of which they complain.

Respectfully submitted,

SIMEON E. LELAND, *Chairman*

JOSEPH J. SPENGLER

DONALD H. WALLACE

EDWIN G. NOURSE

REPORT OF SUBCOMMITTEE ON THE RESEARCH USE OF OPA RECORDS

Your Subcommittee on the Research Use of OPA Records hereby develops in more detail the proposal mentioned in the closing paragraphs of the report presented at the Atlantic City meeting. At that time we suggested the sponsorship of a project for extracting from the OPA records the more valuable research materials. The resulting excerpts, compilations, summaries, and comparisons should then be published in the form of one or more volumes of research materials which would be available generally to research workers.

I. Reasons for the Proposal. Because of the mass of materials, the imperfections of the filing and cataloging systems, and the limitations governing who may have access to the records, the use of this information by independent research workers will be limited. In contrast, a group of persons working on such a project as is proposed here, once they have obtained access to the files, would not only become proficient in the locating of materials, but also would, in one examination of particular files, locate information of use for a wide variety of investigations. Whether the files are being explored by individual researchers or as part of such a project as is proposed here the aid of persons who participated in the wartime control of particular commodities would be invaluable in locating, evaluating, and supplementing information in the files. In our judgment the possibilities of enlisting the aid of former

OPA employees as advisers on particular commodity areas, would be far greater when a well-organized, foundation-sponsored project is under way than when done by the unorganized efforts of individual researchers who are using the files. By no means do we wish to discourage the use of the files by the individual research worker; our view is that such use will only develop a small part of the resource that exists.

II. *Purpose of the Project.* After considering several alternative formulations of the project, we have concluded that the end-product should be a collection of research materials in a usable form which is not itself a research study. On the one extreme we do not believe that any large part of the useful materials can be prepared for publication by merely a process of selecting and editing portions of existing documents. On the other hand we do not at this time propose a rounded research study in which the project staff would analyze certain economic institutions or developments by use of OPA files. Our proposal falls between these extremes. It calls for the preparation of appropriate statistical summaries of quantitative information, for the portrayal of relationships, and for the briefing of qualitative materials. In some cases the staff may need to carry the analysis a considerable distance toward conclusions about the character of markets and prices. Such steps may be necessary in order to hide confidential data, to bring out relationships which cannot be indicated by ordinary statistical tabulations, or to elucidate points which are qualitative in character and which require drawing on a variety of materials.

Our proposal is that the work of the project be pointed toward the preparation of materials bearing on the broad topic, "The Structure of Commodity Markets and Prices." In our view this topic encompasses at least such subdivisions as the following:

1. The production pattern of various commodity areas as shown by
 - (a) Size distribution of producers
 - (b) Proportion of volume of various firms represented by specified products
 - (c) The variety of products and price lines made
2. Vertical relationships
 - (a) Degree of integration
 - (b) Price-cost relationships
3. The cost structure of the industry under study
4. The price structure of the industry
 - (a) Methods of price quotation, which would include geographical price patterns
 - (b) Relation of quoted prices and realizations
 - (c) Differences in prices
 - (i) Among firms

(ii) By brands, price lines, and classes of purchasers

5. The difference in profitability and the changes in profits from year to year according to characteristics of the product and of its market
6. Price leadership, influence of custom, etc
7. Price movements prior to control
8. Sales policy and sales expense in relation to other characteristics of the products and firms
9. The competitive position of firms classified by size, type of price policy, degree of vertical integration, and degree of multiline operations
10. Channels of distribution used and their relationship to sales policy and type of product
11. Business practices not brought out by other subheads

III. *Procedure under Project.* The project should be executed in three stages.

A. *Planning.* Upon the institution of the project a short period, say three months, should be devoted to planning the detailed content and methods of the project. The persons at work in this stage should be those who will occupy supervisory roles in the second stage.

B. *Drawing of Materials from the Records.* The actual drawing of materials from the records will constitute the major part of the project. Among the types of work which should be done are

- (1) Preparation of tables summarizing primary data so as to hide individual cases, show averages, ranges, and other measures of dispersions, margins over items of cost, and relationships among series of data. All statistical summaries should be accompanied by full annotation of source, of adjustments made, and methods of analysis.
- (2) Preparation of textual material to describe characteristics of data too varied to summarize statistically or involving so few cases that presentation of statistical summaries would reveal confidential information.
- (3) Summary statements of qualitative information.

C. *Preparation of Materials for Publication.*

IV. *Estimate of Cost.* Our estimate of the cost of a project of the sort described here and developed on a sufficient scale to prepare and publish the more valuable of the materials in the OPA records is between \$100,000 and \$150,000. This sum should provide twenty to twenty-five man-years plus funds for office space, equipment and materials, and publication. Because of the need to exercise judgment and to plan the particular summaries to be prepared we believe that most

of the staff should be composed of professionals of maturity and experience.

We estimate that the execution of the project would require two years. Of this time, about three months would be required for preliminary planning by a staff of about five. The second stage would last most of the remaining two years and require the larger part of the personnel and budget. The organizing of materials for publication could overlap the latter part of the work of preparing the summaries.

V. *Suggested Immediate Steps.* If you approve the project it is our suggestion that the following steps be taken:

A. Before any formal move is made to obtain sponsorship and financing for the project, the still undecided question as to who may have access to the confidential OPA records should be resolved.

B. In the event the developments under A are favorable, steps should be taken to obtain sponsorship and financial support for the project. In general your subcommittee would favor sponsorship and support from a foundation, research institution, or university. The execution of the project by the Department of Commerce or the Federal Trade Commission is a possibility, however.

Your subcommittee will, if you desire, push for a clear determination as to who may have access to the records. Beyond that, however, we believe further decisions rest with your research committee.

Respectfully submitted,

R. B. Heflebower, *Chairman*

J. K. Galbraith

E. T. Grether

E. S. Mason

A. C. Neal

J. D. Sumner

REPORT OF OUR REPRESENTATIVE ON THE AMERICAN COUNCIL OF LEARNED SOCIETIES

The regular activities of the A.C.L.S. have been somewhat reduced during 1946-47 (the administrative year begins after the annual meeting at the end of January) because the Council has been in the throes of a general reorganization. However, reports from seventeen operating committees, through which the organization largely operates, and from the executive staff were presented at the annual meeting at Rye, New York, January 29-31, 1947, and are in process of publication in the regular way, in a Council *Bulletin*.

It must be said, as the main item of interest, that the energies of the delegates as well as of the executive officers have centered largely in the discussion and preparation of a new basic law for the Council, in the form of a set of bylaws. Respecting the occasion for this, it is enough to note the end of the war, when service to governmental agencies had absorbed so much of the time and energies of the executive and particularly the Director, and the coincidence of the need for "reconstruction" with the arrival of the Director at retiring age; Dr. W. G. Leland was the primary original promoter of the Council and had been its executive head since its beginning, in 1919. Not long after the annual meeting of 1946, delegates received minutes of special meetings of the Executive Committee and Advisory Board, establishing a temporary executive set-up and calling a special meeting of the Council in Boston in September, to discuss, revise, and presumably adopt new "bylaws," a draft of which was circulated and comment solicited. This meeting was duly held (September 21-22) and spent two days in revising the bylaws, which then failed by the narrowest possible margin of passage for submission to the constituent societies. The temporary organization was continued, and after some further amendment, the new bylaws were adopted at the annual meeting of 1947 (January 29-31). New officers were elected, and the selection by a competent committee of a new Director (Professor Cornelius Krusé) was announced.

The new constitutional law makes three main changes, designed to improve the personal quality and work of the Council and enable it to appeal more effectively for financial support. First, the old Executive Committee and Advisory Board are replaced by a Board of Directors, twelve in number, who may in part be elected from outside the delegate members of the Council (chosen by the constituent societies in accord with various procedures). Second, provision is made for electing as many as eight members of the Council itself from outside the delegates, while any one elected as a director from the outside automatically becomes a member of the Council during his term of office. Third, the representation of the constituent societies is reduced to one delegate each, instead of two (after expiration of terms of present members). Thus there is a reduction of about one-third in the size of the Council, which had begun to be criticized for unwieldiness due to increasing size and heterogeneity. A number of new constituent societies have been admitted in recent years, both from the humanities and the social sciences—partly in the latter case because of the policy of the Social Science Research Council not to admit new members beyond the original seven.

Respectfully submitted,
FRANK H. KNIGHT

COMMITTEE ON THE UNDERGRADUATE TEACHING OF ECONOMICS AND THE TRAINING OF ECONOMISTS

The committee aims, by the time of the next annual meeting of the Association, to have completed the work in which it now is engaged. More concretely, we plan to have in order and ready for publication the general report of our committee and the several special reports of our subcommittees. The completion of the work now in process will not in any sense fulfill the responsibilities with which the committee is charged, but will instead constitute only the first step in a direction in which we earnestly hope the Association will continue to move.

The Need for Continuing Study. Our experience to this point leads us to believe strongly that systematic study of the teaching of economics would be an appropriate and useful continuing function of the Association. In the first place, our present investigations already have turned up many more issues than we had in mind when we laid out our program of work. As a principal result of our exploratory studies, we plan to set up these issues so that they can be investigated by a new committee that may be appointed to succeed the present one.

In the second place, many members of the Association have shown a great deal of interest in the work that we are doing. While we know that we have not created this interest, we believe that we have given it some slight stimulation through our conferences and publications, and we are confident that we have at least provided a channel for consideration and discussion of educational questions. This may well be a major justification for the existence of this committee, and for the continuation of the work it has begun. The concern of our colleagues with their objectives, their techniques and their results as teachers of economics has reached a new intensity as a result of international and domestic conditions that are bewildering and disturbing. There seems little hope that the grounds for this intensified interest will be soon removed.

There remains another, somewhat different, educational study that we believe can now properly be undertaken by the Association. This committee has not made any investigation of the large and important field of graduate education in economics. This omission was made deliberately, and for two principal reasons: first, because it was patently necessary to limit the scope of the committee's work; second, because it seemed appropriate to make at least a preliminary study of undergraduate teaching of economics before carrying the investigation on to the graduate level. While concerned with the broad expanse of general education, the recent essay of Mr. Howard Mumford Jones, "Education and World Tragedy," describes with much clarity and insight a confusion of objectives in graduate education that seems to apply with some force to the teaching of economics. This is the indiscriminate application of the same kinds of training (preponderantly training in research) to some graduate students who will become specialized investigators and to many more who will become collegiate teachers. The study in which this committee is now engaged and a study that might be made by a commit-

tee on the graduate teaching of economics would complement each other in many ways. We believe that our present work is far enough advanced to provide some facility and comfort to such a committee. We therefore recommend that a committee of the Association on the graduate teaching of economics be established at the earliest possible time.

Activities of the Subcommittees. Our several subcommittees are continuing their work along lines described in our report made a year ago in Cleveland. Now, as then, there is some unevenness in the actual accomplishments of the several groups. Now, as then, the degree of this unevenness is about what might have been expected in view of the differences in the work to be done, and the varying other demands on the time and energies of members. It would be useless here to comment in detail on the work and plans of all of our ten existing subcommittees, and only a general account of the activities of a few of them will be presented.

Our Subcommittees on the Undergraduate Economics Curriculum and Related Areas of Study and that on the Treatment of Especially Able Students of Economics have completed their reports. These reports have still to be scrutinized and criticized by members of our committee and of our panel of consultants. The subcommittees have been asked to remain active, in the sense that they may still be called upon to consider and act upon criticisms and suggestions arising from the scrutinizing process described above. These tentatively completed reports, each representing a large amount of careful work, deal with subjects of considerable complexity, and the performance of these two groups is warmly appreciated by the committee.

A particularly interesting event of last summer, from the point of view of the committee, was the two-weeks Conference on the Teaching of Economics held at the American University late in August. The Conference was organized and directed by Arnold Tolles, Chairman of our Subcommittee on the Training of Teachers of Economics, and was supported financially by the Alfred P. Sloan Foundation. The seventeen "students" who attended were teachers in colleges as widely separated as Quebec, Florida, and Colorado. The "faculty" was drawn principally from members of our subcommittees and of our panel of consultants. A communication from Mr. Tolles describing the conference appeared in the December issue of the *A.E.R.* Mr. Tolles also has prepared two reports, "Suggestions for Organizing Conferences on the Teaching of Economics," and "A Fresh Approach to the Teaching of Economics," both arising from the experience of the conference last August. The conference provided, along with much stimulating discussion by both its "teacher" and its "student" members, an extraordinary opportunity to secure both a consensus and a variety of ideas that have aided the committee in developing its work.

The Subcommittee on Undergraduate Economics in Preparation for Careers in Public Service and in Business Administration has secured the interest and co-operation of Dun and Bradstreet, Inc., whose Marketing and Research Service has prepared and circulated a questionnaire on college economics addressed to business executives. The subcommittee is working now to canvass opinions of government officials through agencies of the federal government.

The Subcommittee on the Study of Economics in Relation to Education in the Professions is responsible for four reports dealing severally with education in law, in medicine, in engineering, and in social service. Reports on the first two of these fields have been completed.

The most complicated task of any of our subcommittees is that undertaken by the Subcommittee on Economics Teaching in the Schools. At the meeting of the Executive Committee in Cleveland, our committee was authorized to seek the collaboration of the other national associations in the social sciences in sponsoring a study of education in the social studies in the schools, the work to be done and the expense borne by the National Council for the Social Studies. Without going into the details of negotiation, we report: (1) that the National Council continues eager to undertake the work under the auspices of two or more of the associations; (2) that the American Historical Association, having published in 1944 its report on *American History in Schools and Colleges*, does not wish to undertake a closely related study so soon; (3) that the American Political Science Association and the American Sociological Society express much interest in the proposal. These organizations are complicated in structure, the problem is unwieldy, and a working arrangement has not yet been reached. We hope that the Executive Committee will be tolerant of our slowness, and will permit us to continue our negotiations. In view of the dimensions of the work that is planned, it does not seem either appropriate or possible to include the contemplated study in the supplement to the *A.E.R.* that the committee is authorized to prepare and publish.

President Goldenweiser has authorized our appointment of a new subcommittee to study and report on extracurricular arrangements related to the study of economics. This group will examine student publications and student conferences, such as the various intercollegiate ones in which debates and discussions of economic issues are carried on by students. We also propose to organize at once a new Subcommittee on Visual Aids in the Teaching of Economics.

Instead of conducting a general round table on the teaching of economics, as we did a year ago at Cleveland, the committee has been authorized to arrange a series of conferences to be held during the present meeting of the Association. These conferences will raise, for informal consideration and discussion, some of the issues confronting the committee and its subcommittees. All interested members of the Association are cordially invited to attend these conferences.

The unexpected balance of funds already appropriated by the Executive Committee for our use, if it may be carried over to the current year, probably will meet our needs for financing. No new appropriation is requested at this time.

The objectives and methods of our work continue to be as described in our report submitted at Cleveland.

Respectfully submitted,
HORACE TAYLOR, *Chairman*

REPORT OF THE SUBCOMMITTEE ON CONSENSUS REPORTS

At the April, 1946, meeting of the Executive Committee the report of the Committee on Economic Opinion and Public Policy was discussed at length. The parts pertaining to the proposed Board of Editors on economic policy reports were approved in principle but referred back to the committee "with instructions that it study and analyze past experiments, consider additional experiments of the same sort in connection with this year's program, if so determined by the President, and report back a year hence." The committee regrettably feels unable to comply with these instructions and begs to request its discharge. This present supplemental report was prepared at a brief meeting of three members in Chicago on January 20, 1947, and subsequently approved by all members.

Part I of the committee report, dated December 5, 1945, and the relevant appendix setting forth a Tentative Plan for the Preparation of Statements on Public Policy still represent the best judgment of the committee on the subject. Extended discussion at a round table at the Cleveland meeting in January, 1946, revealed considerable interest and yielded no suggestions for significant modification. Most of the misgivings voiced at the April, 1946, meeting of the Executive Committee had been expressed in earlier discussions of the subject and considered in drafting the present committee's report. Experience has shown the handicaps of proceeding on an *ad hoc* year-to-year basis in the absence of a stable subagency of the Executive Committee.

The committee has no serious objection to the suggested rewording of the basic question to read, for example: Should the Association initiate and sponsor efforts to formulate reports and statements of opinion upon public issues which involve economic principles? In various minor particulars the report might be reworded in the light of the discussion last April. But we have no heart for undertaking a revision because we see no prospect that its details would command the substantial encouragement of a changing Executive Committee.

Two special conditions have seemed to render deferment of action excusable if not advisable. (1) The *R.O.E.* project, which arose later, seemed to compete with this committee's interest with respect to funds, leadership, and members. (2) Pressure on professional economists is especially serious in these early postwar years. However, at most these conditions suggest that the project should begin slowly and be at first limited in scope. They do not call for delay in deciding whether the proposed action is to be undertaken with whatever rapidity may be found practicable.

We believe that decision on this point rather than consideration of the details of our proposal should be the concern of the Executive Committee at the April meeting. If the decision is to proceed, any unsatisfactory features of our proposal can readily be referred to a new committee with specific instructions as to the respects in which improvement is needed.

CORWIN D. EDWARDS, *Chairman*

JOSEPH S. DAVIS

EVELINE M. BURNS

THEODORE W. SCHULTZ

JAMES WASHINGTON BELL

REPORT OF OUR REPRESENTATIVE ON THE SOCIAL SCIENCE RESEARCH COUNCIL

During the past year the representatives of the American Economic Association attended two meetings of the Board of Directors of the Social Science Research Council, in April and in September. At these meetings the directors heard reports by the executive director, the chairmen of the twenty-six active committees, and several conference leaders.

The scope of the Council's current activities can only be suggested. At present they may be grouped in four major categories: (1) efforts to improve the quality of research; (2) conduct of specific research; (3) service and advisory functions; and (4) endeavors to better the conditions under which social science research is carried on. Among matters presently of especial concern to the Council are the status of federal legislation relating to research in the social and the natural sciences and the possibility that the social sciences may not continue to attract a sufficient proportion of the most able students. The Council's special research committees welcome the co-operation of economist-scholars interested in the areas of subject matter under consideration by these committees. Publications by these committees are obtainable, as a rule, from the Council.

Of especial interest to economists at present is the work of the following committees—work which probably will eventuate in publications: economic history; employment; world area research; federal government and research; government records and research; housing research; labor market research; Latin-American studies; measurement of opinion, attitudes and consumer wants; military applications of social science; organization for research in the social sciences and university social science research organizations; social adjustment (old age); social aspects of atomic energy; social science personnel; source book of economic statistics; and war studies. The studies and conferences recently sponsored by the Council include, among others, several having to do with food habits, with research in marketing, and with interdisciplinary approaches to research in the field of social science.

Respectfully submitted,

JOSEPH J. SPENGLER

REPORT OF OUR REPRESENTATIVE ON THE BOARD OF THE NATIONAL BUREAU OF ECONOMIC RESEARCH

In June, 1946, the National Bureau held a twenty-fifth anniversary celebration meeting in New York City. Papers were presented by a number of distinguished American and foreign scholars. These have been published by the National Bureau in a book entitled *Economic Research in Relation to the Development of Economic Science and Public Policy*. The Bureau is also in process of publishing a series of several reports related to major research programs during its first twenty-five years.

With the return of staff members from service in the armed forces or other war work the research programs of the Bureau swung once again into high gear in 1946. The year was also marked by visits to the National Bureau by many scholars from other countries coming to study its materials and methods. Many requests were received from abroad for National Bureau publications, especially those pertaining to national income.

The current research program of the Bureau includes continuation and expansion of studies in the fields of national income, employment and productivity, business cycles, commodity prices, the labor market, and banking and finance, and new projects among which are those relating to the flow of money payments, the effects of taxation on business incentives, and long-term changes in international economic relations of the United States.

The principal study now in progress in the national income field relates to some aspects of distribution of income by size.

In the field of business cycles the Bureau will soon publish a bulletin on statistical indicators of depression and recovery. This will represent a revision and amplification of the bulletin published in 1938 on indicators of cyclical revivals.

Extensive work in the field of business cycles includes cycles in incomes of individuals, business profits and their relation to business receipts and outlays, construction and business cycles, consumption expenditures, harvest cycles, international financial transactions, prices and production, manufacturers inventories, changes in wages and the labor force. Mr. Mitchell is preparing a preliminary summary volume on *What Happens During Business Cycles: A Progress Report*.

In the field of employment and productivity the Bureau is continuing its studies of service industries which were begun in *Income From Independent Professional Practice*, by Friedman and Kuznets, and *Domestic Servants*, by Stigler. Studies are also under way on employment and earnings in the fields of education, trade, and government.

Extensive studies are in process in the field of banking and finance dealing with various aspects of urban real estate financing, agricultural finance, consumer installment credit, war financing and experience with default, yields, and investment values of corporate bonds.

The Conference on Research in Fiscal Policy has nearly completed three projects—an estimate of the postwar federal budget, a study comparing the definitions of business income for tax purposes and for business purposes, and an investigation of the tax treatment of capital gains and losses.

Among the principal new undertakings of the National Bureau, three are of special interest. An exploratory study of the flow of money payments will be completed by Morris Copeland during the year 1947. This study will give a measure for each of ten segments of the economy of the amount paid and received and the debt and credit position.

A second noteworthy study, to be carried on under the auspices of the Conference on Research in Fiscal Policy, is a study of the effects of taxation on business incentives.

A third study, still in the project stage, is envisioned as a series of studies concerning long-term changes in the basic elements in economic relations between the United States and foreign countries. Their purpose is to determine interrelations between secular developments in the domestic economy and abroad and developments in our international relations.

The list of universities designated to nominate Members of the Board of Directors of the National Bureau has been enlarged in recent years to include the Institute for Advanced Study, Northwestern University, and the University of Toronto.

The Economic History Association has been added to the organizations designated to nominate Directors of the National Bureau.

The membership of the Board allowed by the bylaws has been increased from thirty-five to forty-two with the purpose of permitting selection of additional members-at-large from fields such as agriculture, heavy industry, consumer interests, engineering, and the like.

Respectfully submitted,
DONALD H. WALLACE

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1947

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** Supplement.—Fifty-second Annual Meeting:

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Supplement No. 2.—Handbook of the Association, 1940. 2.00

No. 5 (February, 1941)

Fifty-third Annual Meeting (December, 1940):

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Volume XXXI, 1941

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Volume XXXII, 1942

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- Supplement No. 2.—Papers Relating to the Temporary National Economic Committee. Pp. 135. .50
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Papers and Proceedings, Employment Act of 1946 and a System of National Bookkeeping; Social and Economic Significance of Atomic Energy; Public Debt: History, Effects on Institutions and Income; Economic Forecasts, and Monetary Aspects; Role of Social Security in a Stable Prosperity; Economic Outlook; Economy of the U.S.S.R.; Domestic versus International Economic Equilibrium; Prices: Wartime Heritage and Some Present Problems; Banking Problems; Productivity in the American Economy; International Trade Organization; Vital Problems in Labor Economics; Transportation and Public Utilities Problems; Housing Problems; Economic Research; Changing Character of Money. Pp. 781. 1.50

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